FEBRUARY • 1959

FIREMEN

VOLUME 26, NUMBER 2. COPYRIGHT 1959 NATIONAL FIRE PROTECTION ASSOCIATION PRINTED IN U. S. A.

Winter Fire Aftermath — *see page 7*

ONAL FIRE
ECTION
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63rd
year

FIRE PREVENTION CONTEST WINNERS › › Page 8

WOULD YOU LIKE TO BE "IT"? › › › › › Page 16

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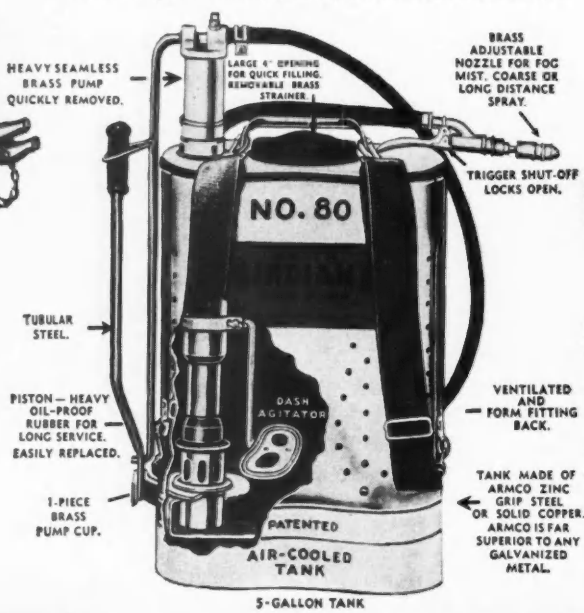
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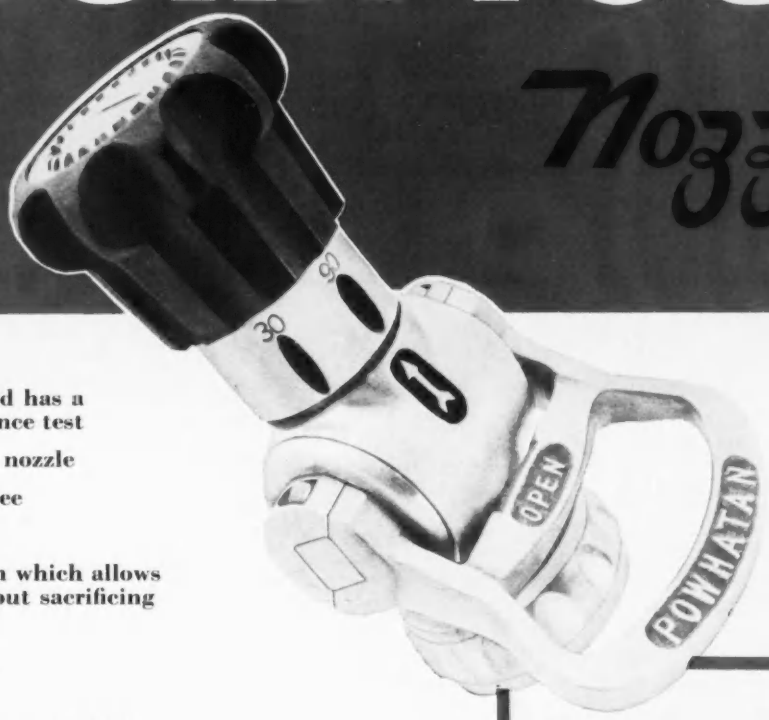

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1½" -60	57	60	72	88
1½" -100	95	100	105	107
2½"	135	165	190	225

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Mack uses the finest materials for utmost strength without excessive weight.

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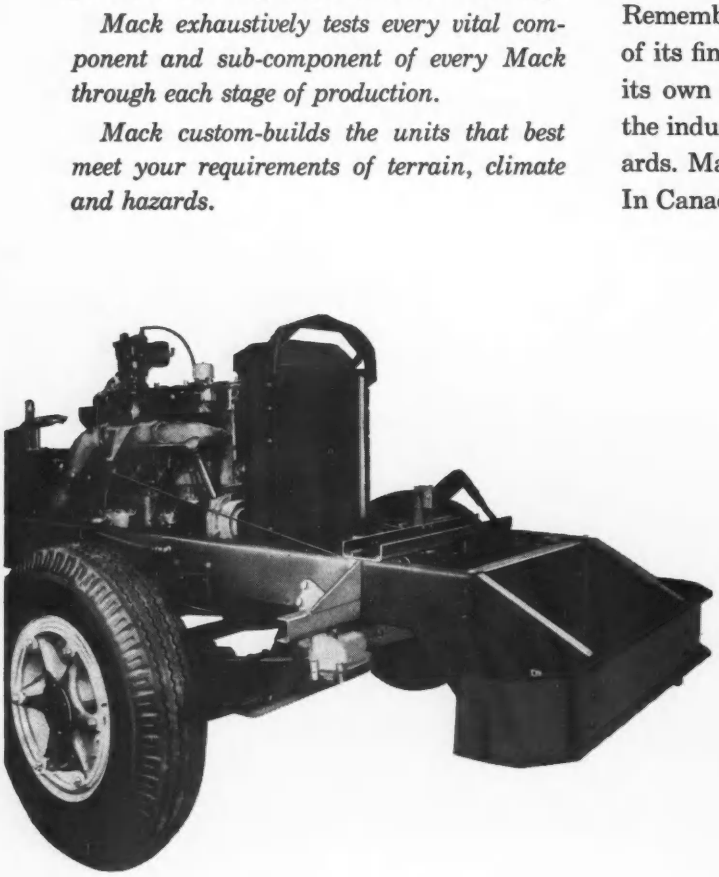

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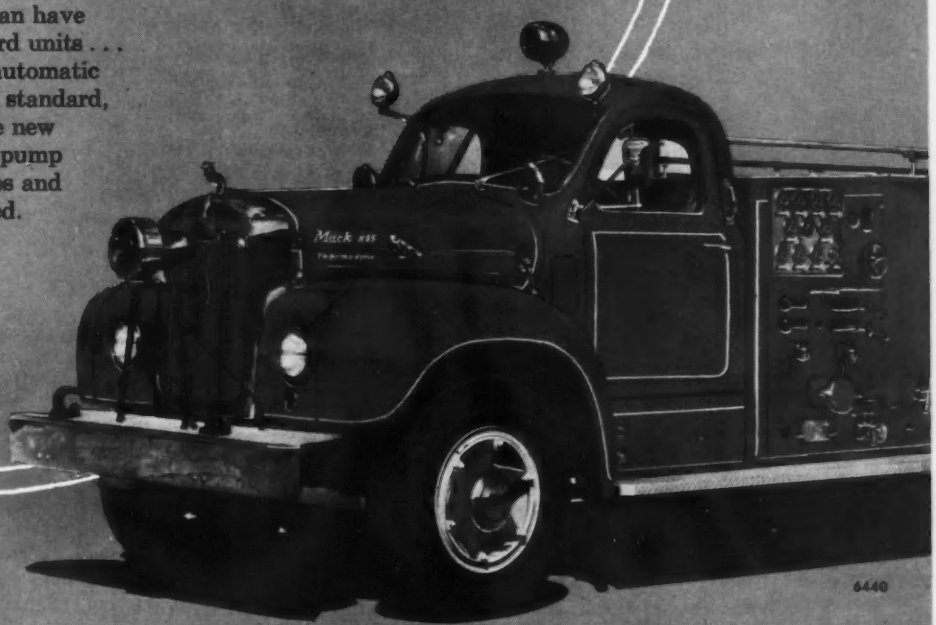

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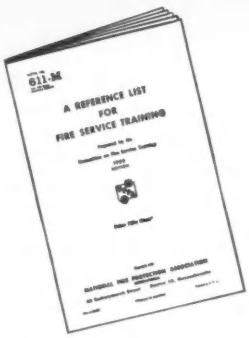

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A "MUST" FOR FIRE TRAINING OFFICERS!

A REFERENCE LIST for FIREMEN'S TRAINING

A great many fire department training officers and other instructors will find this revised reference list extremely useful. It was prepared to help instructors and fire fighters to know the source of important published material relating to their work and training.

Basically, this reference list describes publications which have already proven useful for basic or elementary courses of training. While it is not a complete bibliography on fire matters in general, it gives the names and addresses of the important publishers of this material, such as the following:

British Information Service
California Fire Training Program
The Reuben H. Donnelley Corporation — Case-Shepperd-Mann Department
Doubleday & Company
Factory Mutual Engineering Division
Florida State Fire College
The International Association of Fire Chiefs
The International City Managers' Association
Iowa State College
Los Angeles Firemen's Relief Association
Louisiana State Firemen's Association
National Board of Fire Underwriters
National Commission on Safety Education
National Fire Protection Association
Ohio State Department of Education
Oklahoma State University
Underwriters' Laboratories
U. S. Superintendent of Documents
University of Maryland
and others.

All of the books and pamphlets mentioned in this Reference List have been reviewed by the NFPA Committee on Fire Service Training. The texts listed were judged to be accurate and up to date and of proven usefulness for fire service training and instruction.

The Reference List will be very useful to every fire department that wants to develop up-to-date libraries for fire stations. It also serves as an excellent reference source for fire fighters taking promotional examinations because it refers to publications covering many aspects of firemen's training, fire fighting and fire control.

National Fire Protection Association
60 Batterymarch Street
Boston 10, Massachusetts

Gentlemen: Please send me.....copies of a "Reference List for Firemen's Training."

Name.....

Street.....

City.....**Zone**.....

County.....**State**.....

☐ **Check enclosed for**..... **dollars**
☐ **Bill me later**

FIREMEN

Volume 26 • Number 2

A monthly magazine published for the fire service members of the National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts.

Warren Y. Kimball *Editor*

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Henry S. Gere *Advertising Manager*

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The wintry combination of a snowstorm and near-zero weather was an important factor in the fire shown on this month's cover. Actually, this fire occurred in Rochester, New York, last February, but the photo shows so vividly the conditions fire fighters in the northern United States and Canada encounter at this time of year, that it seemed worth-while to hold the picture for this particular issue.

This fire involved two adjoining and communicating five-story and basement brick-joisted buildings. Delayed discovery and alarm, plus the fact that the sprinkler valves had been closed for some time previous, were other factors that led to a loss of nearly $500,000. The Rochester Fire Bureau responded with 14 engine companies, 6 ladder companies and a special unit, and the Monroe County mutual aid was put into effect to provide covering companies in the city. The fire apparently had started near an open elevator shaft, then extended to the top floor where it mushroomed. There was plenty of apparatus and a good water supply, but fire attack was complicated by the bitter cold, high winds and a snowstorm. In addition to hand lines, about twenty heavy streams were used to confine the fire to the buildings of origin, including streams from ladder pipes, deluge sets and portable monitors. Result was that the front of the structure developed a coating of ice, the last of which was reported to have melted sometime in May.

Incidentally, since closed sprinkler valves were an important factor in this incident, readers are referred to an important article on this subject on pages 11 and 12 of this issue. In this Rochester fire, both chief officers and fire fighters followed proper procedures in locating the valves as first companies responded to the alarm. However, the fact that the valves were frozen, and that they were dangerously exposed to fire, prevented use of the sprinkler system by the fire department.

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It's time, now, to think of Spring and the annual clean-up campaigns that reach into almost every community when the days grow longer and warmer. And again this year the NFPA has prepared attractive and useful materials that can be put to good use by fire departments and other organizations. (See page 30.) However, as brought out in the story on page 8 of this issue, a clean-up campaign or a year-round fire prevention program demands combined action from many persons and representative groups in each community. For the fire department, the task of selecting key individuals and getting their cooperation and labor through a prolonged campaign is not easy. It can be accomplished, though, as shown by many of the top entries in the NFPA Fire Prevention Contest each year. For Oshkosh, Wisconsin, and Ocean Falls, British Columbia, the help that the fire department got from citizen groups was an important factor in the winning of Grand Awards. In addition, the well-planned campaigns that made up the year-round programs undoubtedly won some new respect for these two fire departments and assurance of support for future clean-up and fire prevention programs.

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The preliminary estimate by the NFPA Fire Record Department of fire loss in the United States and Canada was reported in the January issue. Unfortunately, three zeros were dropped from the figure representing fire loss in the United States. That is, the item stated that fires cause 11,500 deaths and $1,305,000 loss in the U. S. As indicated by a subsequent sentence, the U. S. loss was in the billion-dollar range, that is, *one billion, three hundred and five million dollars!*

Ocean Falls, British Columbia

GRAND AWARDS!

Oshkosh, Wisconsin

WINNERS OF THE 1958

FIRE PREVENTION CONTEST!

OSHKOSH, Wisconsin, and Ocean Falls, British Columbia, won the grand awards for municipal entries in the 1958 Fire Prevention Contest. Despite the excellent programs and entries of many larger municipalities, these two (Oshkosh, population 47,000; Ocean Falls, population 3,000) got the highest point totals from the contest's board of judges. A list of other grand award winners and the top entries from the various municipal classes is shown on the opposite page. (A complete listing of results of all classifications has been sent to all contest entrants and is available free on request to the NFPA Public Relations Department.)

As mentioned frequently in this magazine, full appreciation of fire service activities in the cause of fire prevention can only be gained by making personal study of contest entries. It is obvious each year that more and more fire departments are learning how to capture community attention for these worthwhile fire prevention projects. It is also evident that business and industrial personnel are pitching into the various programs and bringing new talent and resourcefulness to the projects.

It should be pointed out that the principal weakness in the entries which did not win top awards seemed to be in the first category reported on the entry blank — "Organization." Invariably, the best entries in each classification reflected good organization, practical assignment, and the carrying out of projects to a planned conclusion. On the other hand, there were a number of municipalities that submitted excellent entries showing well-planned inspection programs, year-round and Fire Prevention Week activities that were limited only by lack of good organization.

The two grand award winners, Oshkosh and Ocean Falls, showed excellent balance in organization, planning, development and conclusion of their year-round campaigns. In Oshkosh, for example, Fire Chief Otto M. Stoegbauer and Ben Pitcher, Executive Vice President of the Chamber of Commerce, spearheaded activities in that Class 5 municipality. The winning entry was sponsored by the Chamber with Lieutenant Commander Charles C. Gibson serving as Chairman of the Chamber's Fire Prevention Committee and responsible for organizing the year-round campaign. The campaign was aimed not only at business, industry, educational and recreational institutions but also at hospitals and nursing homes and military establishments in the area. Some of the groups that were brought into the organization plan included: the Women's Division of the Chamber of Commerce (Spring Clean-up and Fire Prevention vote pledge), the Retail and Commerce Division (cross-inspections and window displays), the

Grand Awards!

Municipal	Oshkosh, Wisconsin Ocean Falls, British Columbia
Industrial	Ford Motor Company, M-E-L Division, Pico-Rivera, California
Military	Fort Ord, California — U. S. Army Wright-Patterson Air Force Base, Ohio U. S. Air Force Naval Ammunition Depot, Hingham, Massachusetts — U. S. Navy HMC Dockyard Esquimalt, British Columbia—Department of National Defense, Canada
Government	General Services Administration Region 3, Washington, D. C.

MUNICIPAL DIVISION — CLASS WINNERS

United States		
Class	I	Minneapolis, Minnesota
	II	Memphis, Tennessee
	III	Hartford, Connecticut
	IV	Portland, Maine
	V	Oshkosh, Wisconsin
	VI	West Milwaukee, Wisconsin
	VII	Cokato, Minnesota
Canada		
Class	A	Vancouver, British Columbia
	B	Kitchener, Ontario
	C	Arvida, Quebec
	D	Montreal West, Quebec
	E	Ocean Falls, British Columbia
	F	Manitouwadge, Ontario

Boy Scouts (emergency disaster mobilization), the Camp Fire Girls (baby sitter training course and displays), the Sisters of Mercy (hospital, disaster planning) and the industrial association (helped out in fire brigade training activities and inspection). The safety council, teacher's association, a boaters' club, insurance groups and public utility personnel also formed part of the Fire Prevention Committee.

Playing an important role in all of the fire prevention planning and activities of course were Chief Stoegbauer, Deputy Chief Anthony Lueck, Lieutenant Inspector Jarvis Stankey and all personnel of the Oshkosh Fire Department.

The Fire Department continued a three-year-old program of home inspections, covering 3,100 residences last year. It also conducted a controlled burning project to rid the city of dangerous buildings and other hazards. The daily newspaper ran a novel "Whodunit?" series during Fire Prevention Week, picturing blocked exits, cars parked by hydrants and other unsafe practices.

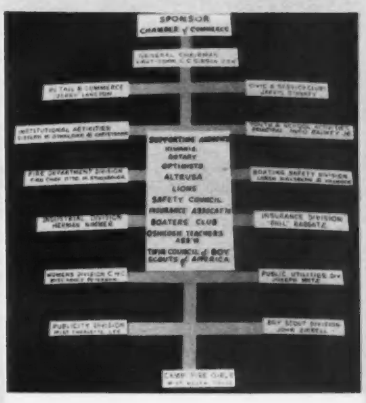
Ocean Falls, British Columbia, is a different type of community with its individual fire problems. This municipality is isolated, located in an inlet some 350 miles north of Vancouver. There are no radio or television stations, and transportation to Vancouver and other areas is limited to a daily float-plane and boats which come to Ocean Falls weekly. With these limitations the fire department headed by Chief V. O. Anderson had to depend upon public address systems, local newspapers, fliers and posters to spark the year-round fire prevention program. Ocean Falls is primarily a pulp and paper mill community but, of course, it has other small business and industry, a hotel, a hospital, schools and churches. Since it is situated in a forested area, outdoor fires are apt to be a major problem.

As reported in the entry, the fire department was the principal sponsor and "watchdog" on all fire prevention activity. In addition to Chief Anderson, Assistant Chief J. Bushell, Lieutenant M. McNamara and other members of the department established a small fire prevention committee with definite objectives for the year. The principal aim was to put across a fire prevention program to the community with particular attention to educating children, youth organizations and "New Canadians." A fire committee was established including representatives from the fire department, the "townsite" and mill management. Personnel from the two local newspapers, a photography club, the hotel, hospital, churches, service clubs and other local business and industry also served from time to time in the fire prevention project.

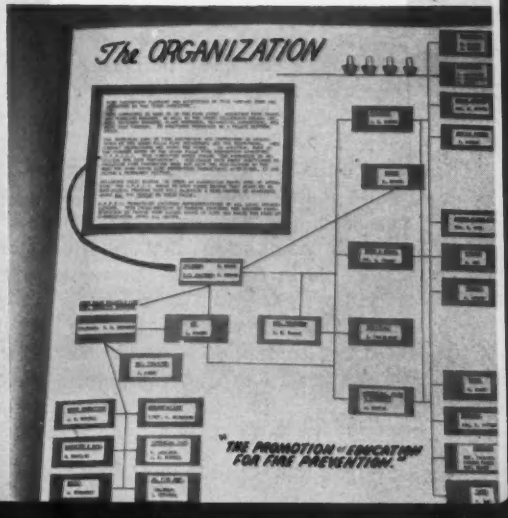
The Ocean Falls entry reported several unique activities. Chief Anderson and his men trained a junior fire department, and the youngsters not only practice with the senior volunteer members of the department, but when fire occurs they serve as messengers and also help to establish control of any crowd that gathers.

Fire safety is part of the curriculum in all schools. Teachers use a manual on fire prevention education to work fire safety subjects into their instruction throughout the year.

The Fire Prevention Committee ran a novel contest by telephone with a "Jackpot" for housewives. This contest featured the telephoned spelling of Fire Prevention Week in various languages, and the person



(Right) Tables of the organizations in Oshkosh (top) and Ocean Falls that created the winning fire prevention programs.



answering the phone had to guess what language was being used and what was being spelled. This proved particularly attractive to the "New Canadians."

The volunteer fire department members held vigorous inspection programs, concentrating particularly on all places of public assembly but also giving attention to dwellings. Whenever a public function was to be held in any building, the structure was inspected beforehand to make sure that exits were adequate, extinguishers were properly placed and filled, that all decorations were flameproofed and that other sensible fire safety practices were enforced.

These are but a few of the significant features that made the Oshkosh and the Ocean Falls entries worthy of receiving the top awards in the NFPA Fire Prevention Contest. Subsequent issues of FIREMEN will include other reference to these two entries which should be helpful to other fire departments throughout the United States and Canada that are already embarked on their 1959 fire prevention programs.

Tips on Organization

IN PLANNING an organization for a task or objective, three basic questions should be considered: What needs to be done? Who can do it? When can the job be completed? Certainly the many different problems in the scope of fire prevention demand serious consideration and effective action. As far as the Contest is concerned, the plan of organization might be evaluated by the following questions: Were the "goals" reasonable? Did the organization include the individuals or groups who could help to bring these goals within reach? How much did the fire department take part in the program?

Section I of the Contest entry blank "Organization for Fire Prevention" can receive a maximum rating of 20 points (out of a possible 100 for the complete entry) and asks the following questions:

1. What organization is the principal sponsor of fire prevention planning and activities in your community (fire dept., chamber of commerce, Grange, etc.)?

2. What organizations cooperated in the past year's fire prevention activities (and briefly describe what they did)? . . . If fire department was aided by a fire prevention committee, list functions and groups represented.

3. Title of fire department man in direct charge of fire prevention. . . . List other personnel assigned. . . . Do you have a fire prevention code? . . . When first adopted? . . . When last amended?

4. What main objective did you hope to accomplish this year? . . . Other objectives. . . .

For the contest entries, Section I is particularly important. Attention is given to the role of the fire department in initiating or taking part in the basic organization for fire prevention in the municipality. For larger communities it is usual for the Chamber of Commerce to be the principal sponsor of the entry, giving help to the fire department by contacting business and industry and allocating jobs for completing different aspects of the fire prevention program. However, it certainly is important that the fire department plays a major role in the actual fire prevention planning and activities. The grand award winners for Oshkosh and Ocean Falls reflected this kind of participation, for in these two communities the fire chiefs or other officers "kept a finger on the pulse" of the year-round program.

Question 2 is also significant. It should be appreciated that a continual, effective fire prevention program frequently is beyond the capabilities and available time of fire department personnel alone. Depending upon the size and type of community, it certainly is important that individuals or groups from the major representative elements of the community, that is business, industry, municipal services, education, medicine, recreation, etc., be asked to participate. Generally, this can be handled pretty well by establishing a fire prevention committee with the necessary representation and giving this committee particular functions to complete in a certain time. The fire department should be well aware of the major fire protection and prevention problems. Its main task is to make the public equally aware and then to get the corrective action. This problem is so broad that the fire department needs help from many "specialists" from the various "publics."

Question 3 brings out another aspect of fire prevention within the fire department organization, that is whether the fire chief is attempting to handle this important function all by himself or has delegated the task to a certain officer with perhaps a staff of capable personnel. Certainly the fact that a community has a fire prevention code is important, for it is through such a code that the fire department, its officers and men can receive the authority to effect fire prevention.

The adoption date of the code is perhaps not too important unless that date was a number of years ago, in which case the date of amendment becomes significant. In other words, if a community established a code 20 or 30 years ago and there have been no amendments, it might appear that the fire department was lax in keeping up to date on fire protection and fire prevention problems and working towards effective legislation.

Question 4 asks for the objective of the program. Again, scope is important. An objective of "general fire prevention" does not reflect good planning. "Controlled burning of trash and waste materials," "improving community dump conditions," "safe-guarding places of public assembly" and "getting maximum fire protection in schools and churches" all seem more realistic and worthwhile main objectives. Secondary objectives should be considered in the same light.

Some of the 1,500 contest entries, indicating the magnitude of the judging problem. Every entry is examined carefully and graded. Judging them below are S. Bruce Black, Board Chairman, Liberty Mutual Insurance Company and NFPA General Manager Percy Bugbee.

PLANNING FIREGROUND ACTION FOR

SPRINKLERED BUILDINGS

By Warren Y. Kimball, Manager, NFPA Fire Service Department; Editor, FIREMEN magazine.

IT IS well known that automatic sprinklers help to control about 96 per cent of the fires in which they operate. Nevertheless, because of the great value at risk in many sprinklered buildings, there have been some very large losses in the small percentage of fires sprinklers did not control. In 1957, 36 fires of more than $250,000 loss occurred in sprinklered buildings. Among the leading reasons for these losses have been "sprinklers shut off" and "inadequate water supplies."

Under the latter category, unfortunately, in too many cases the fire department operations were not properly planned to take advantage of the sprinkler system. One of the chief sources of trouble has been the attempt to supply fire department hose streams from private water supplies, which were intended chiefly for sprinklers and first aid fire fighting and were not designed to supply the large volumes needed for modern fire department pumpers. Similar trouble has been encountered where the primary supply to sprinklers is from a small public main which also supplies the hydrants the pumpers normally use.

Suggested Inspection Form for Sprinklered Properties

Name of Plant.....
Fire Inspection District No.....
Location.....Fire Alarm Code No.....
Description of Property.....
Plant Official Responsible for Sprinklers.....
Phone.....
Type of Automatic Sprinkler System (Wet, Dry, Deluge, etc.).....
No. Sprinkler Heads.....Size of Connection to Main.....
Automatic Sprinkler Valves:
Location.....Type.....Controlling.....
Cold Weather Valve.....
Water Supplies to Sprinklers:
Public Main....., Gravity Tank....., Pressure Tank.....,
Private Fire Pump....., Volume in Storage.....
GPM Available....., Static Pressure.....
Fire Department Connections:
Location.....
Company Assigned to Pump into Sprinkler System on First Alarm.....
Hydrant to be Used (normal procedure).....
Supplemental Pumper Supply Available.....
Sprinkler Alarm Devices:
Local Waterflow.....Master Alarm Box.....
Central Station.....
Supervised by.....
Remarks: Include any pertinent special information that may affect fire department operations.....
.....
.....
.....
Inspected by.....Approved by.....Date.....

For years fire departments have been given general instructions concerning the proper operation at fires in sprinklered buildings. The NFPA Industrial Fire Brigades Training Manual, for example, stresses the following items:

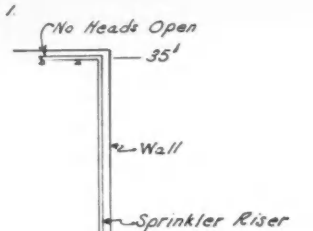
1. The importance of connecting pumpers to sprinkler systems.
2. The importance of making certain the valve is open and of keeping it open until the fire is out.
3. The importance of stationing a man at the valve.
4. The importance of connecting pumpers to water supplies which will not reduce the pressure or volume available to the sprinklers.
5. The importance of promptly shutting off the sprinkler valve when the fire is out to prevent unnecessary water damage.

In view of the fact that every sprinklered building involves a potential fire or life hazard, we suggest that each fire department develop planned operations for sprinklered buildings in its territory. Shown below is a new, special inspection report form for recording facts that the fire department will need to know. Each fire department may want to change the format and the requested details to fit its own method of operation, but the general facts are important and should be covered.

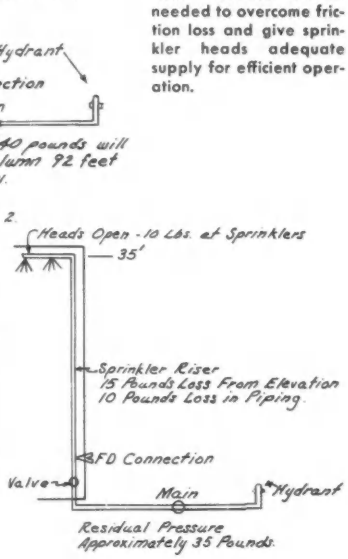
Most well-run fire departments have rules regarding connection of pumpers to sprinkler systems. Generally, either the first due or second due engine on the assignment card is assigned to the fire department sprinkler connection. Frequently, however, the rule is not strictly observed and this neglect has resulted in the destruction of much property. A pumper should be required to hook up to the fire department siamese connection to the sprinkler system and should stand by until relieved by the officer in charge. If connection is not made to the sprinklers until the fire is obviously out of control, this is almost always too late.

There are just too many things that have to be done on the fire ground to leave anything as important as sprinkler operation and supply to chance. The officer in charge is usually busy locating the fire, determining its extent and ordering lines to be placed. He should not have to give detailed orders regarding the initial supply to the sprinkler system. That should automatically be done according to established plans. It is important that pumpers be placed where they will not seriously reduce pressure on the sprinkler system. This means that they should not connect to private mains too weak to supply both pumpers and sprinklers, but should be connected to hydrants on large public mains where available.

When there is a working fire in a sprinklered building it is desirable to pump at least 500 gpm into the sprinklers. This means that not less than one 3-in. line or two 2½-in. lines should be attached promptly to the



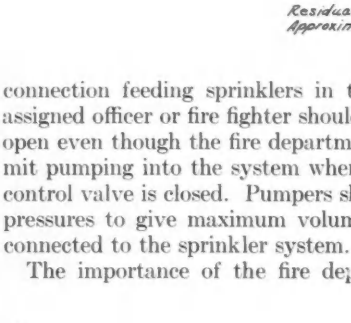
(Left) Typical installation shows public hydrant with static pressure of 40 pounds supplying sprinklers with perhaps 25 pounds at 35 ft. elevation. Pressure will be needed to overcome friction loss and give sprinkler heads adequate supply for efficient operation.



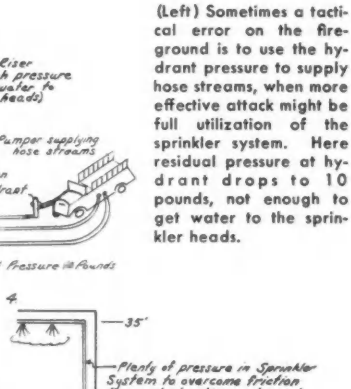
(Right) Opened heads operating at 10 pounds pressure cause friction loss in piping and mains so that residual pressure in hydrant drops. Pumpers drawing from the same main that supplies hydrant will weaken flow to sprinklers.

connection feeding sprinklers in the fire area. Some assigned officer or fire fighter should see that valves are open even though the fire department connections permit pumping into the system when the main sprinkler control valve is closed. Pumpers should be operated at pressures to give maximum volume through the lines connected to the sprinkler system.

The importance of the fire department pumper in maintaining proper pressure on the sprinklers can be appreciated from the following diagram. Let us assume that the normal static water pressure is sufficient to provide the necessary 15 pounds pressure for proper discharge from the top line of sprinklers. With many heads open and hose streams in use, friction loss will occur in the sprinkler piping and the water mains feeding the sprinklers. If the sprinklers are fed from a public main which also must supply fire department pumpers, we know that heavy fire flow demand may reduce pressure in the main to a mere 5 or 10 pounds. This will not be enough to supply the sprinklers effectively. Unless there is a fire pump or other private source of water pressure, the only way effective pressure can be supplied to the sprinklers once any appreciable number of heads have opened is to immedimediately pump an adequate volume into the system. Pump pressure should be high enough to overcome friction loss in the hose to the sprinkler connection, overcome loss in the sprinkler piping and fittings, overcome any elevation of the sprinkler heads above the level of the pump and supply good pressure at the sprinkler heads. In general, about 150 pounds at the pump will be needed to supply 100 pounds at the base of the sprinkler system and more pump pressure may be needed if supply lines are long. Sprinkler systems are hydrostatically tested to withstand the required pressures.



(Left) Sometimes a tactical error on the fireground is to use the hydrant pressure to supply hose streams, when more effective attack might be full utilization of the sprinkler system. Here residual pressure at hydrant drops to 10 pounds, not enough to get water to the sprinkler heads.


4.
35'
Plenty of pressure in Sprinkler System to overcome friction loss and elevation, and supply good pressure and volume to sprinkler heads.
FD Connection
Valve
Hydrant
Main
Pump Pressure 150 Pounds.
Residual Pressure 10 Pounds

(Right) A better method is to supply two 2½-in. lines to fire department connection of sprinkler system with about 100 pounds pressure at this connection.

IN ADDITION to a pre-fire planning survey report, each consolidated report of fire in a sprinklered building should include pertinent additional information regarding automatic sprinkler operation such as:

No. of Sprinkler Heads Operating
Location of Heads Operating
Result of Sprinkler Operation
Reason for Any Unsatisfactory Operation
What Fire Company Was Assigned to Connect Sprinkler Connection?
What Member of Department Was Assigned to Check Control Valve?
Who Closed Valve After Fire?
Is Sprinkler Protection Fully Restored?
By Whom?
Did the Private Water Supply to Sprinklers Operate Satisfactorily?
Was Water Pumped Into System?
Did Fire Department Connect to Sprinkler System?
If not, why not?
Fire Company Connected to Sprinkler System——
Company No.————
Number of Sprinkler Heads replaced by Fire Company————.
Type of Heads Installed————————.

Of course, the fire report will also indicate other fire fighting equipment such as hose streams used on the fire. In addition, a fire company that has pumped into a sprinkler system should prepare a detailed report including orders received, lines connected to sprinklers, water supply used, pressure maintained, and length of time sprinklers were supplied.

Item 380, "Fire Department Connections" of NFPA Standard No. 13 on sprinkler systems, says:

"A connection through which a fire department can pump water into the sprinkler system makes a desirable auxiliary sup-

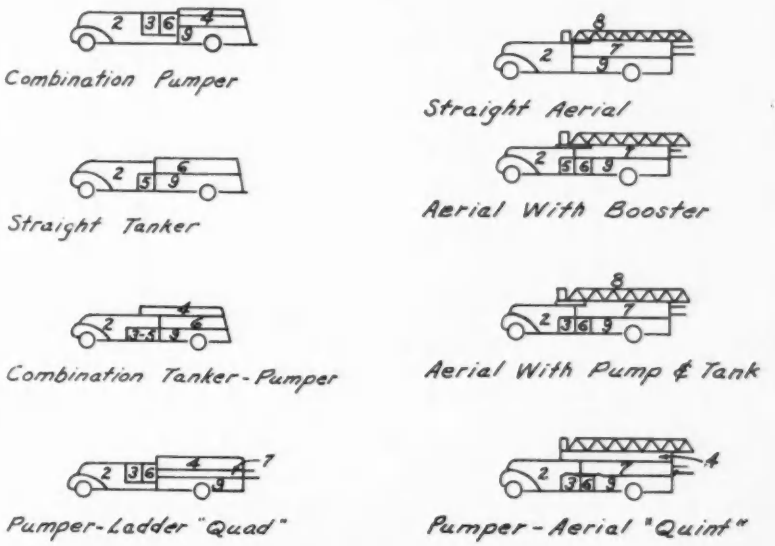
(*Continued on page 18*)

GET THE RIGHT AERIAL LADDER!

THE NFPA Fire Service Department is often asked to advise fire departments on the purchase of aerial ladders. Actually, all the purchasing fire department has to do is to specify that the entire truck shall conform to NFPA Standard No. 19, "Specifications for Motor Fire Apparatus." The chapters of these specifications cover the requirements of bid and delivery, provisions applying to all types of modern apparatus such as the engine, electrical system, road tests and other performance, and Chapter 8 deals specifically with aerial ladder trucks.

Fire department aerials often must be used under extremely hazardous conditions of wind and weather. They must sustain live loads of fire fighters and rescued persons; they must support the load of heavy hose and sustain the reaction of heavy streams from ladder pipes. Aerial ladders must also be capable of use on all sorts of terrain, at various angles of elevation and extension which normally would not be necessary for commercial utility ladders. Aerial ladders must be moved quickly from one elevation or angle to another to permit rescues, and there must be ample power in the operating system and safety devices to prevent unwanted movement in any direction. Manual controls are also essential, to permit emergency operations such as retracting the ladder with the power shut off.

These requirements are not necessarily provided in the small commercial aerials used by tree trimmers and utility crews. Persons introducing these smaller ladders into the fire fighting service should know of the hazard to human life that may well be involved. All ground and aerial ladders intended for fire department service should pass the ladder tests outlined in NFPA Standard No. 193. These supplement the tests of the aerial ladder and truck in No. 19. A ladder which cannot meet these tests should be rejected as unsuitable for fire service use.



The chapters of Standard No. 19 apply to various types and portions of fire apparatus. Numbers on sketches above indicate the appropriate chapters, such as: 2. vehicle; 3. pump; 4. hose body; 5. booster pump; 6. water tank; 7. ground ladders; 8. aerial ladder; 9. equipment carried.

In addition, for aerial ladder trucks, the specifications call for a complement of at least 8 other ladders totalling 219 feet, including 5 extension ladders, 2 roof ladders and 1 straight wall ladder. Also required is an extensive inventory of tools and equipment needed for fire department "truck work." A fire department aerial ladder truck, like other acceptable apparatus, must meet tests of road performance, weight distribution, tire and axle loading, angle of departure for road clearance, and other elements of good fire apparatus design. Of particular importance for aerial ladders are the features affecting vehicle stability and reliability of power. Before a fire department buys an aerial, the local fire insurance rating bureau should be consulted so that the apparatus purchased will meet the minimum requirements for credit. In general, compliance with Standard No. 19 will be specified. There are no underwriters' tests for aerials similar to those for pumpers but it is desirable to invite the rating bureau to be present when the new truck is officially put through its acceptance tests.

In selecting a new aerial to comply with Standard No. 19, there are only a few major decisions that the purchaser must make: 1. What length of aerial ladder do we want? 2. Do we want a custom-built ladder truck chassis or a commercial ladder truck chassis? 3. Do we want a service type chassis or a tractor-trailer type aerial ladder chassis?

Aerial ladders come in standard sizes of 65, 75, 85 and 100 feet long. However, a few years ago, a survey of fire chiefs using 65-foot aerials showed that the majority would prefer to replace these with longer aerial ladders.

Whether the aerial is mounted on a commercial or a custom-built chassis is a matter for the customer to decide. A fact that should not be forgotten is that the service life of aerial ladders frequently exceeds 20 years, and a well-considered expenditure is likely to provide a vehicle which will prove adequate and fully satisfactory for many years. If pennies are pinched in buying an aerial ladder truck it may need replacement at a much earlier date or possibly maintenance costs for the cheap vehicle will be extravagant. The safety of the ladder crew and of the public should also be considered in the selection of the aerial.

EMERGENCY REPORTING

An important summary of effective fire alarm systems for various types of communities.

From a talk at the Kansas Fire School, by Robert A. Young, Special Assistant to Director of Municipal Surveys, National Board of Fire Underwriters.

THE method of receiving and transmitting emergency alarms concerns every fire department. The degree of reliability and extent of the system depends upon the facilities provided by the municipality, the fire department and the telephone company. A complete municipal fire alarm system fulfills two functions, that of receiving alarms from the public through fire alarm boxes located on the street and transmitting alarms to fire companies which should respond.

Municipal fire alarm facilities also include provisions for receipt of alarms from commercial telephones and the means necessary to alert other interested groups, such as police and water departments, that a fire emergency exists.

Standards have been developed for the installation, maintenance and use of municipal fire alarm systems. They mainly apply to complete systems, but cover all methods by which alarms are received and firemen are notified.

Every community should install some facility, available to the public, for transmitting an alarm and a means of notifying paid or volunteer firemen. The standard fire alarm telegraph system with siren, air horn, bell or whistle meets these requirements.

Each fire alarm system studied by engineers of the National Board of Fire Underwriters or rating bureaus is graded on the degree of adequacy and reliability. One point to remember is that some fire alarm systems may be so unreliable or inadequate that they are worse than if no system were installed.

A simple fire alarm system for a small community might be made by installing an iron rail, tire iron, or large bell hung from a post at the main corner, with a sledge hammer chained to the post and a sign near by to designate operation in case of a fire. Everyone should know the location of the sledge and all volunteers could theoretically hear the continuous ringing. Some disadvantages would be that a person might have to travel quite far to report an alarm and that the volunteers might not hear the alarm because they were some distance away. An improvement is to mount an operating switch under glass or in a box on the wall of the fire station and to have this switch energize a siren, air whistle or some other alerting device. The switch may be located at some other conspicuous place which can be seen from the fire station and it is preferable to install an indicating light over the switch.

A fire alarm system meeting the requirements of NFPA-NBFU Standard No. 73, whether of telegraph or telephone type, offers the best method to provide improved fire alarm service to the public. Under present design, wired circuits are necessary when boxes are installed. We recommend that any fire alarm circuit be supervised to assure reliability of service. A box should be visible from the main entrance of any building in congested districts, and, in order to reach a fire alarm box it should not be necessary to travel in excess of one block or 500 feet in mercantile or manufacturing districts, with a distance of 300 feet being preferable, nor in excess of two blocks or 800 feet in residential areas, with a distance of 500 feet being preferable.

Several types of circuits are in use with telephone type boxes. Two or more boxes have been installed on a common circuit terminating at an alarm telephone thus forming a conference trunk circuit. This system has disadvantages: trouble on the circuit disables all boxes and there is no positive way of identifying the box in use. Another type of system incorporates several boxes, each on an individual circuit but relayed to a common telephone. Failure of one box would not disable the system but location of the call would be indefinite.

The acceptable system, a type installed in many cities, consists of individual, supervised circuits from each box with terminations at individual positions on a switchboard. This type has unlimited capacity and its size depends only upon the number of boxes leased by the city. Switchboards vary from 10- to 400-circuit capacity. Telephone companies have developed a system for communities where public officials do not want to lease a large capacity system. This should soon be in production. It will consist of standard telephone boxes with each box on a separate supervised circuit. The single-position, cordless switchboard will have a capacity of 40 circuits including fire trunk lines and other circuits, with space for sprinkler supervisory alarms, trouble signals and other operating devices. Power facilities will consist of an alternating current rectifier but may include batteries if the city so desires. All facilities of the larger systems are being incorporated into the smaller unit.

It must be remembered that in any telephone-type fire alarm system the point at which alarms are received must be manned 24 hours a day. No automatic means have been developed for sounding a siren when a telephone box is used. This would probably be undesirable when the other uses of the box are considered.

Several suggestions are offered in regard to telephone box installations. The box handset should not be equipped with a dialing mechanism as these boxes should not be used to make official or private calls other than the fire, police and possibly one or two other municipal departments. The only movement necessary to send in an alarm should be by lifting the handset off the hook; any telephone message which follows describes the nature of the emergency. The box should be conspicuous and, if it is on a pole, a band should be provided. The "Emergency Fire-Police Telephone"

sign is a worthwhile addition. The circuit lead to boxes should never be attached to buildings or originate in cable boxes within buildings. The underwriters recognize the availability of public outdoor telephone booths and unlocked police call boxes and give a small credit for such facilities.

Most fire and emergency alarms are received over commercial telephone circuits regardless of whether fire alarm systems are installed or not. The problems arising from this type of alarm are many, and loss of life and property has occurred because of mechanical, electrical or human failure or error in transmitting the alarm over commercial circuits.

A manually operated central office or exchange with a telephone distribution coverage the same as for the fire district response represents few problems other than possible circuit trouble and few suggestions can be made to improve this service. The operator knows which line is in use to report the emergency and can easily trace and monitor all calls; and she usually has a good knowledge of the areas covered by the district. Arrangements are generally made for the operator to sound a fire alarm and relay messages to the fire department.

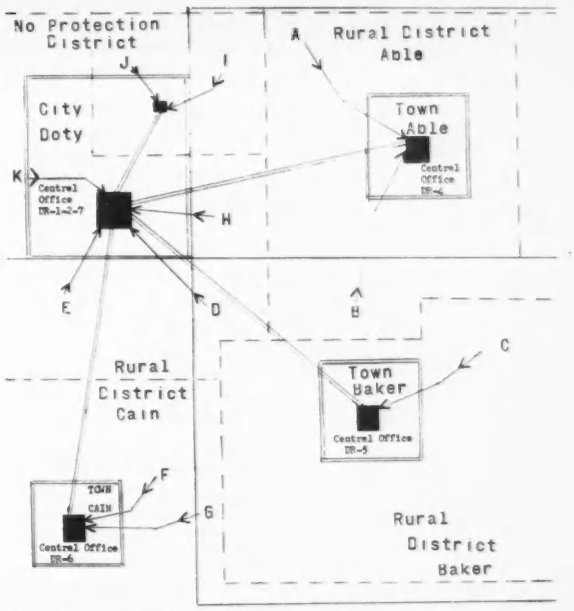
Unfortunately, today the telephone company's manual central office is being converted to a machine switching or dial central office. Frequently the machine switching operations in smaller communities are unattended except for routine visits by service personnel. Consequently the nearest operator may be 15 or more miles distant from the community. The greatest problem arising from alarms being transmitted through an unattended central office building is where the reporting party dials "operator" to report an emergency. The mechanical and electrical equipment in these substations is well installed and supervised and should present no unusual problems.

Refer to the sketch above that shows Central Office Drexel 1-2 and 7 in City Doty. This is the only location where regular operators are on duty 24 hours a day. Any emergency calls, where the operator is dialed, which originate in the City of Doty, the Towns of Able, Baker and Cain, the three fire protection districts and the area without fire protection must be answered by one of the operators on duty at this key central office. Can you logically expect this operator to notify the proper fire department if the calling party does not know his respective fire district?

We sympathize with the telephone companies in regard to this problem and feel that they are justified in taking the administrative position that their regularly assigned telephone operators should not take the responsibility of dispatching fire companies to alarms.

The telephone operator on duty has a group of answering positions for each unattended central office and she can determine that the call is originating in the area covered by Drexel 4 or Drexel 5 or other areas. She has the listed phone numbers of all of the fire departments in the area and she can reach any department quickly. But the problem which confronts her is which one of the overlapping fire districts should receive the alarm.

The best answer towards solving this problem is for the respective fire districts to publicize their areas of operations widely and to inform all residents of the



Difficulties of typical telephone alarm systems in small communities are shown by this sketch. If operators are not on duty 24 hours daily in telephone central offices of Able, Baker and Cain, calls at night will go to central office in Doty. There an operator may have to determine alarm location by guesswork, then notify the fire company responsible for protecting that particular area.

fire department phone number. Encourage all residents to post the name and listed fire phone telephone number near each telephone and in the telephone book.

Some citizens will always dial the operator to report an emergency regardless of instructions or signs. The next step for handling this type of call is to arrange for a central dispatching office for the area or at least a point where the operator could relay a call for routing the alarm to the proper department. An efficient arrangement consists of departments Able, Baker and Cain to contract with City Doty for fire alarm service. All emergency alarms would be received and transmitted by Doty fire alarm dispatchers who would be on duty 24 hours a day. All direct dialed and operator calls would be routed to the Doty fire alarm office where they would be processed for fire district response. The dispatchers would then sound the correct siren by remote controlled radio or wire circuit and would relay the data on fire details by direct telephone to the department concerned.

Another alternative would be to provide the county sheriff's office with fire district maps and cross index guides. The operator could then route questionable calls to the office, and police on duty could relay the calls to the proper fire department. County fire alarm centers are in service in some states. Another suggestion is for each fire department to maintain a master record of district boundaries, for these departments to lease a direct telephone line to the two adjoining fire departments, and for each department to relay an alarm to the next department when the emergency is outside its respective district. In all cases the telephone company operator would be expected to monitor any "operator called" emergency.

(Continued on page 28)

WOULD YOU LIKE TO BE "IT"?

by Chief James W. Just, for many years a leader in fire service training and a charter member of the original NFPA Committee on Firemen's Training.

RECENTLY a chief officer had occasion to suspend a fireman at the scene of a fire for refusing to comply with a perfectly reasonable and proper order. This action required a later hearing before the mayor or his duly appointed hearing commissioner. The hearing consumed some seven days and produced 800-odd pages of sworn testimony — not to mention the weeks required in preparation for the hearing and the time lost by everyone concerned.

As this is written the final result of the hearing has not been announced (*suspension approved — Ed.*), however, no matter what the final outcome may be, it will be of small consequence in comparison to the value of the lessons to be noted by anyone in the fire service. The writer was privileged to sit in at this hearing, and could not help wishing all firemen could have attended.

In beginning any discussion of the lessons to be learned from this case, probably the most important one is simply this: no fire fighter should ever lose sight of the fact that any alarm he answers may be the first step to his appearance, as a principal or a witness, before a judge, jury or a hearing commissioner. This could be the result of an act of insubordination (as in this case), suspected arson, an insurance dispute, an accident, or what have you. In making such an appearance, the fire fighter may find that his opinions and guesswork are "incompetent, irrelevant and immaterial," and he will be expected to answer many questions under oath, many of which will seem to *him* to be irrelevant and immaterial.

There is one important item that has never been stressed enough in fire service training programs. The fire fighter who has had no training, or has failed to absorb what was offered him, is fair game to a smart attorney, who will have no trouble in discrediting all or most of his testimony through the simple expedient of showing that he is an incompetent fireman who is not familiar with modern fire fighting techniques.

Let us assume, first of all, that you are the principal in some sort of case. It will become necessary for you to present witnesses in your behalf, and it would appear logical to select your closest friend. However, it doesn't necessarily follow that he will help your cause from the witness stand with a smart lawyer working on him. You must consider his attitudes, his personality, and his background as an intelligent fireman.

As an illustration from the case in question, the defense put a buddy of the defendant on the stand. He had been a member of a fire department for over 30 years, and might have been a good witness. But, he was, in his own estimation, the department's smart boy — or clown. He never for a moment realized that he was facing two lawyers and a commissioner who were not only smart, but who considered the hearing a serious proceeding.

This man had never learned the first and most important principle of witness stand technique, that is, to keep quiet, except to answer every question with a "Yes" or "No." If the attorney *wants* an explanation he will ask for it. Otherwise, he will change the question.

So, our witness in this case answered questions with wisecracks and "smart-alec" answers. The more his pals in the audience snickered, the better he thought he was doing — until the commissioner threatened to clear the room. The witness said, for example, that he always used a straight stream, then when the smoke got too bad he would switch to fog to "push the smoke back," then repeat the performance. When he was dismissed from the stand the following exchange occurred:

Witness (to Prosecutor): How about you — you got any more questions?

Prosecutor: If I had any more I would ask them.

Witness: And I'd have an answer for you!

Prosecutor: I'm sure you would.

Then there is the important question of the "expert" witness! The best advice we could offer would be to never call on an "expert" unless he is a specialist in some line, such as a chemist or an electrical engineer.

In this case the defense went to some expense to bring in a retired deputy chief from a large city department. The deputy took the stand with an air of confidence and promptly, under oath, admitted to the prosecutor that he was an "expert."

The fire concerned had been in a small one-and-two story building that had the appearance of a converted barn with a hay loft. It was generally referred to as a garage. While our "expert" had not been at the fire, and was working from a newspaper picture, he promptly stated that "there was no ventilation." The prosecutor then asked — "If I were to inform you that there was a window out on the west side, a window out on the north end, other windows out, a hole burned through the roof, holes burned through under the eaves, a window out on the south end of the loft, a three-by four-foot door open in the south end of the loft, and a pair of double garage-type doors open in the south end of the first floor, would you *still* say there was no ventilation?" Believe it or not, the "expert" answered "Yes"!

Then the questions turned to fog nozzles, and the "expert" was soon hopelessly confused in the matter of friction losses, delivery, and pressures. He finally had to admit that in *over 40 years* in the fire service, he had *never used a fog nozzle*, that he had *never seen any tests made on fog nozzles, nor had he ever read the results of any tests made elsewhere* in the country. Upon further questioning, he stated that his department "had a few" fog nozzles, but *he* never bothered with them because he "had no confidence in 'em"! After being asked "What happened to heat at a fire," he replied that "It went up to the point of most resistance then went somewhere else"!

I'll let you decide what his testimony was worth. When he left the stand he appeared blissfully unaware of the fact that he had been thoroughly "de-experted" by a smart attorney who had never been a fireman in his life. That brings up another important matter.

It will be more than likely that your attorney will know nothing about the fire service other than what you tell him. See that he is properly and accurately coached along every line likely to be brought up in the questioning. As a precaution let us suggest that you get help on this job by someone who may be more familiar with the technical phases of modern firemanship than you may be. In this case, the prosecuting attorney was coached by a smart chief, whereas the attorney for the defense was evidently poorly coached. As the hearing progressed toward the end, the defense attorney's sense of frustration was increasingly evident.

We would be remiss if we did not also include the saga of the "Visiting Fireman." The defense put a witness on the stand who testified that he was an ex-volunteer from a near-by village but he had lived in the city for the past eight years. He knew all the answers — and was having a small-size field day for himself. His sense of importance was quite obvious. Along the way he was asked what was meant by reference to a "nozzle cracked open." He unhesitatingly replied that "there was no such thing — you either opened it or you shut it." And that was the beginning of the end of his usefulness. He admitted he chased the fire in his truck, helped drag and connect hose, was up on the roof and all over the place — *but*, he had never reported his presence to any officer nor asked if they wanted his help! In our opinion, he was just plain lucky that his witness stand appearance was in connection with a comparatively trivial matter about which he knew nothing of consequence, instead of as a principal in some sort of damage suit or accident claim.

Now, if the idea hasn't already gotten through to you, the point is that the prosecuting attorney, properly coached, took practically every one of dozens of defense witnesses and made them better than fair witnesses *for the prosecution!* He used practically every one of them to prove the allegations set forth in the complaint.

The salient facts in this record might be briefly summed up as follows:

1. Whenever possible, avoid such experiences.
2. If you are called as a witness, no matter how much you know or think you know, stick to "Yes" or "No" and let the attorney fish. The lawyers know what they want brought out — and it isn't always what *you* think. You can out-talk your usefulness.
3. If *you* need witnesses, hand-pick them for intelligence, personality and background knowledge, and *not* simply because they may be personal friends.
4. If you require an "expert," be darned sure he *is* one — and don't forget that forty years' service as a fire department member does not necessarily make an expert. Sometimes it does not even assure that he is a *good* fireman. As a matter of fact, he could well be twenty-five years behind the parade.
5. See that your attorney is properly and thoroughly coached in firemanship as it may apply to your case.
6. Get the idea completely out of your head that you, under oath, are going to out-smart an attorney.
7. Take yourself and the action seriously. You can be very sure everyone else will.
8. Don't mix in where you have no business, except for good reason, and then only with extreme caution.
9. Never overlook the value of training, nor pass up the opportunity for a bit of "book-larnin." The more you know about your job, and especially the technical and up-to-date features of good firemanship, the less likely you are to encounter embarrassment, disillusion, and downright confusion should you ever become a voluntary or, what is more likely, an involuntary occupant of the witness stand.

Naperville's Public Relations

THE July, 1956, issue of FIREMEN magazine described the well-planned public relations program of the Naperville, Illinois, Fire Department. The fire department for a number of years has made good use of a thorough program designed to keep the local public and national fire journals informed of the department's progress and achievements.

Lt. Paul H. Boecker, in charge of fire prevention and public relations, recently pointed out the value of "making honorary members" as part of a fire department public relations program. During the past year, two prominent Naperville citizens were given these awards and community response was most satisfactory. Each had been instrumental in helping the fire department establish a baby-sitter training program for high school students and develop a comprehensive fire prevention program for the younger children.

(Right) Shown with Sister Philomena as she accepts her award are (left to right) Fire-Policeman William Quigley, Lt. Paul Boecker, Sister Philomena, Fireman Robert Klingbeil and in cab, Engineer John Shimp and Fireman Paul Riedy.

(Right) Presenting award to Ralph Beebe (center) are Lt. Boecker and Fireman Klingbeil. (*Photos by Ripsky.*)

Model Steamer at Robinson Lake

RETIRED Chief Charles H. Weiler, who operated the Robinson Lake Fire Department in Kenton, Michigan, has sent this photo of a model Amoskeag steamer which he made to scale in 80 hours of detail work. The chief whittled all wooden parts of the working model which he states, can pump a gallon of water per minute and can build up pressure to 100 pounds. The carved driver represents one Paddy Fitzgerald, a fire fighter who served in the 1900's. There is also a figure of an engineer representing Chavez O'Brien who also served in the early days. Chief Weiler uses this model for fire prevention instruction for the youngsters. Back in February, 1949, FIREMEN magazine described his one-man fire department operating in the upper peninsula of Michigan. He was also a warden in the Ottawa National Forest and served as a fire prevention patrol in four townships.

Despite the fact that he "did not have a fire in twenty years" Chief Weiler has been dedicated to the principles of fire prevention and fire safety. He received splendid cooperation from persons who owned and used property at Robinson Lake and he has long advocated adoption and use of NFPA codes.

Sprinklered Buildings

(*Continued from page 12*)

ply. For this purpose, one or more fire department connections shall be provided in all cases except where permission of the authority having jurisdiction is obtained for their omission."

In some cases, provisions of Paragraph 380 have been misinterpreted by sprinkler installers to mean that the insurance inspection organization could waive requirements for fire department connections even though these are specifically recommended by the local fire department that provides fire protection in the community. The cost of these connections is relatively small and in many cases where chief reliance for sprinklers is going to be placed upon public water mains where the pressure may be reduced by fire flow demands, the fire department connection should be a "must." The connection is also highly desirable where sprinklers are primarily supplied by private water supplies which may not be adequate for fires of more than incipient size. Many private water supplies cannot take care of 10 or 12 sprinkler heads plus 3 or 4 hose streams used simultaneously. In some cases, "reverse hydrants" are provided so that pumpers can pump directly into the private water mains which in turn feed the sprinklers and private hose streams. NFPA pamphlet No. 25 "Fire Department Hose Connections for Sprinkler and Standpipe Systems" gives details on standard fire department connections.

Better Hose Care-with CIRCUL-AIR
HOSE CONDITIONING EQUIPMENT
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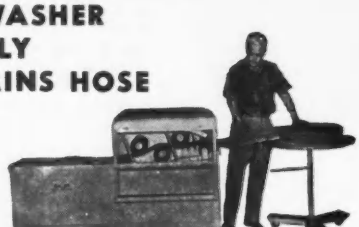
AUTOMATICALLY
WASHES—RINSES—DRAINS HOSE

ROTO-JET Washes, Rinses, Drains hose thoroughly and quickly. Hose is self-propelled. Simple one-man operation. With or without detergents, ashes, glass and sludge are automatically scrubbed out and flushed away. Lengthens hose life. Foot-Pedal Operation.



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The patented, electrically operated Circul-Air hose dryer circulates pre-warmed fresh air through loosely coiled hose at the rate of 5 to 6 air changes per minute. No other drying method is so fast — so economical — so easy to use. The preferred dryer in over 5,000 leading Fire Departments.

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Approved by Underwriters' Laboratories . . . and Canadian Standards Association. Recommended by all leading fire hose manufacturers.

The fast, modern way to handle, store and load hose.

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MOBILE
HOSE STORAGE
AND
LOADING UNIT

Saves valuable space. Holds 1,800 ft. of 2½" hose—proportionately more of 1½"—in an 8 ft. space (when loading table is detached). Roll it right up to the truck for reloading—out of the way when not in use. Equipped with locking fiber-wheeled casters.

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If you are planning to build or remodel, send for our brochure "Fire Station Design."

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EQUALLY ESSENTIAL

for RELIABLE PROTECTION

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AUTOMATIC ALARM SYSTEMS scientifically engineered, skillfully manufactured and expertly installed

Regular inspections, tests and complete maintenance by specially trained technicians

...and you get ALL with ADT

When you install a protective system, it must be kept in perfect operating condition at all times. Even though your fire or burglar alarm equipment is well designed, carefully manufactured and properly installed, it can be no better than the attention and care it receives.

Every ADT Protection System receives regular, specialized attention to assure that it is constantly in readiness to operate in emergency. The value of such maintenance measures is evident in the enviable record of *service* supplied year after year to over 65,000 commercial and industrial establishments and other properties in approximately 2,000 municipalities from coast to coast, and to highly important security systems used by more than 30 Government agencies in upward of 300 locations.

Only ADT has the extensive facilities, trained personnel and years of experience to give your property, profits and employees' jobs the security they deserve.

The following ADT Automatic Protection Services can be combined to give you better protection *at lower cost.*

SPRINKLER SUPERVISORY AND WATER-FLOW ALARM SERVICE — for sprinklered properties.

AUTOMATIC FIRE DETECTION AND ALARM SERVICE—for unsprinklered properties.

PREMISES BURGLAR ALARM—for doors, windows, walls, ceilings and other points of entry.

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Because of their practical experience with HALE Fire Pumps and pumping units, Fire Fighters, the world over, know that it pays to Specify HALE for new apparatus.

Kept modern by constant laboratory and field research, HALE pumps are noted for simplicity, efficiency and quality. They are sold only through manufacturers of Quality Apparatus. They are built in all standard capacities.

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What to Do about . . . Acids

THESE suggestions on handling various incidents involving acids are excerpted from the NFPA book *Fire Protection for Chemicals*. The 152-page book was written by Deputy Chief Charles W. Bahme of Los Angeles and is available from NFPA at $3.00 per copy.

Emergency Action — Acids

1. SPILLS
   (a) Ventilate the area quickly.
   (b) Use gas masks wherever toxic fumes such as nitric oxides are observed. Firemen have died as a result of breathing these orange-brown fumes for only a few minutes.
   (c) Use a neutralizing-absorbent mixture wherever obtainable; — *e.g.*, sodium carbonate (soda ash) and diatomaceous earth; (required to be provided near point of storage in airtight, labeled containers, in Los Angeles.) Small spills can be readily soaked up. If sawdust has already been used prior to arrival, mix in some soda ash or bicarbonate of soda to neutralize the acid and then scoop up the absorbed liquid and place it in a metal covered container pending final disposal; if sawdust is not neutralized, soak with water, and warn occupants against burning it in an incinerator.
   (d) Flush spills with large volumes of water if out of doors or in areas where water will not cause additional damage. Flooding is not recommended for acid spills in chemical storerooms. A small amount of water may cause heating and violent spattering of water-reactive chemicals which may be present, such as calcium oxide or sodium hydroxide. The heat generated when a small amount of water is thrown into a tank of sulfuric acid may form steam and cause violent eruption.
   (e) Throw on dirt, sand, talc, etc., where no neutralizer or water is available.
   (f) Protect skin from burns — if sulfuric acid gets on hands, wipe as much as possible off on a rag; next clench fists (to keep out moist air) and go to a bucket of water or hydrant and rinse.
   (g) Protect clothing — rubber boots are suitable for most mineral acids.
2. IF CARBOY IS BROKEN
   (a) Neutralize, flush or absorb as indicated above.
   (b) Move other carboys from the spill area, using care to avoid breakage.
3. CONTAINERS EXPOSED TO HEAT
   (a) If drums and carboys are exposed by radiated heat from fire, keep them cool with water spray to prevent their bursting.
4. ACID PIPES
   In plants where acid is piped within the building in lead tubes (usually suspended from ceiling or fastened to overhead supports), be careful to avoid any dripping acid. Heat-actuated shut-off valves on such lines help to reduce this danger.
5. OPEN VATS
   Where open vats are present in buildings involved in fire —
   (a) Avoid falling in — (should be covered at end of working day).
   (b) Avoid throwing direct streams into tanks which may cause violent reaction or spattering. (Cases have been reported of empty drums which formerly contained oleum, for example, blowing up when hose streams were turned into them.)
6. GRAVITY TANKS
   Where acid gravity tanks are on top of or inside of a building involved in fire, unprotected metal supports should be kept cool to prevent their collapse; keep out from under them.

New UL of Canada Listing

UNDERWRITERS' Laboratories of Canada is distributing its September 1958 list of inspected appliances, equipment, and materials. This supersedes the September 1956 edition and all supplements.

The new book, consisting of 230 pages, has 725 listings of products examined and tested as to life, fire, and casualty hazards.

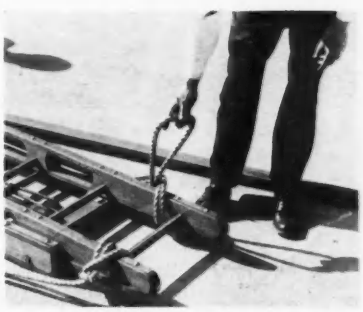
Copies are free and will be distributed to all those on the current mailing list of the Laboratories. Requests should be addressed to the Head Office, 7 Crouse Road, Scarborough, Ontario.

THE AUDITORIUM RAISE

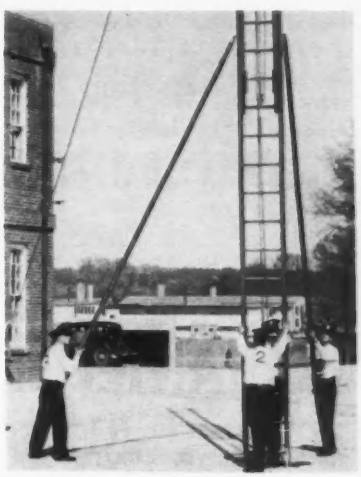
Auditorium raise with eight-man crew. Four men are on the guy lines; two men hold the poles quartered with the ladder and two heel men each keep one foot on the bottom rung. The halyard is tied in. This evolution is strictly for emergency operations and should not be used for stunting or showmanship.

ONCE in a while fire departments have to use extension ladders in high ceilinged buildings such as churches, super markets, exhibit halls, and auditoriums. A typical incident calling for such work might be a fused sprinkler head, a small fire caused by a short circuit or possibly even an injured workman who needs first aid and rescue. One method of handling such incidents is the auditorium raise illustrated at upper right. This is merely a refinement of the standard six-man evolution of raising pole ladders (shown below) illustrated in the NFPA publication, "Handling Hose and Ladders."

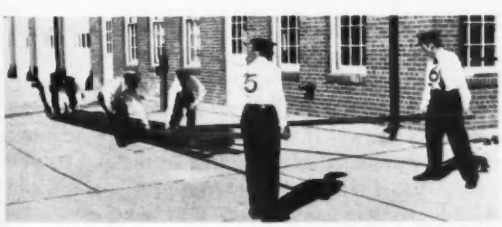
For the auditorium raise it is not necessary for the men on the guy lines to pull but it is recommended that each man loop the rope around his waist to make his grip more secure. When the ladder is raised he should watch the top so that the ladder will be maintained in the proper vertical balance with the minimum of sway in any direction.



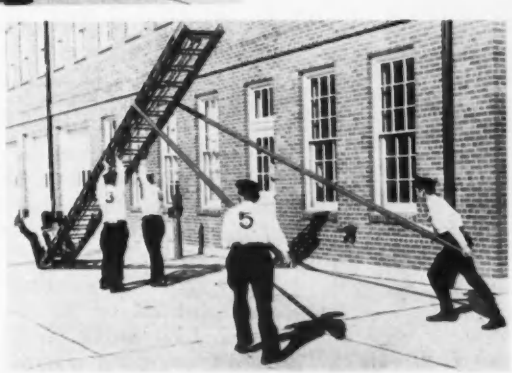
In preparing for the auditorium raise the fly ladder is extended one rung. Loops from the exact center of two 100-ft. ropes are placed over the beam behind top rung and looped over beam end as shown so that it cannot be pushed off the end. The ladder is then raised to the vertical position (see below) by the standard method and men hold the guy ropes. The fly ladder is raised to the desired height and the halyard is tied.



Position of heel and pole men after the auditorium raise is completed.



(Left) A standard method of raising the pole ladder shows six men — two on the poles, two beam men with hands on rung — palms to rear, and two heel men.



(Right) Beam men lift, turn and start walking towards ladder end on ground as pole men also help to raise the ladder.

Beam and heel men hold ladder vertically as pole men move to proper position. The ladder can be pivoted by an outside pole man tilting the ladder on an inside heel. For the auditorium raise the two beam men and two other men can move to the guy ropes.

WHAT IS YOUR RESPONSE?

IT IS the obligation of every fire department, paid or volunteer, to see that the first alarm response to every fire is adequate in the number of men and equipment dispatched, taking into account the type of district from which the alarm is received and the nature of the call. Any alarm of fire is an emergency at which both lives and property may be at stake. The fire department is organized and pledged to save lives and property. When an alarm is received there is no justification for procrastination or a limited ineffectual response.

Standards for what constitutes reasonable and effective initial response to alarms have been in effect for more than half a century and have been revised from time to time as the fire protection art has developed. In general, not less than two properly manned engine companies together with a ladder truck or at least suitable ladder equipment are the minimum response in residential areas. In congested residential districts and in mercantile and manufacturing areas much greater first alarm response may be needed, particularly in the larger cities.

Except for known small fires outside of buildings, it is never safe to send a single piece of apparatus as the sole first alarm response. There is not only the danger of accident in traffic or failure of automotive equipment, but if there is a working fire there are too many things to be done at once by a single fire company.

When we speak of proper manning of fire companies we are thinking of at least five men on duty with a pumper company, six men with a ladder company and eight men with a pumper-ladder company. In high value districts more men are needed. In volunteer companies, four volunteers or part-paid men are considered the equivalent of one man on duty. If the pumper has a paid driver on duty, at least sixteen volunteers will be needed so as to have sufficient men always available. These men should respond promptly when the apparatus rolls. The practice followed in some places of sending only the paid drivers on the initial call and of sounding a call for the volunteers only for serious fires does not constitute good protection.

As mentioned previously in FIREMEN magazine, at least twelve men responding with two pumpers plus a ladder or squad truck, under the command of a chief officer, are about the minimum that can be considered as reasonable first alarm response in residential areas of light hazard and this does not represent full company manning.

In districts of ordinary hazard the first alarm response would be two or three pumpers with five men each and at least one ladder truck with six men plus the chief and his aide. In districts with multi-family residences including rooming houses, apartments and tenements of three or more stories in height, it is a good practice to assign a second ladder company because of the life hazard. Such a response might consist of fifteen or more men assigned to pumper companies, twelve or more men assigned to ladder companies, plus a chief and his driver, or a total of twenty-nine fire fighters. If we assume that one of the engines and one of the ladder companies are designated for high value manning and carry seven men each, we would have a proper response of thirty-two men in this instance. In high value business districts first alarm response may be eight or more pieces of apparatus, officers' cars and forty or more men.

We suggest that each fire department check its assignments for first alarms and see that sufficient men and equipment are assigned in each area or district to provide a good initial response to each alarm. If in doubt as to the adequacy of the response now being given, the local insurance inspection department should be consulted for advice.

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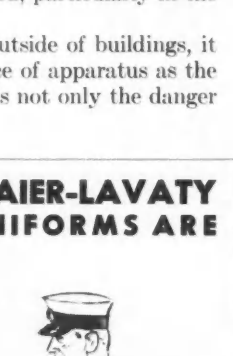
This guarantee is backed by 40 years' serving continuously some of the most particular and large uniform operations in the United States . . . by financial responsibility equalled by few other uniform manufacturers . . . by a unique labor relationship never interrupted by dispute. It is easy to find out about us. Now — let us show you a Maier-Lavaty uniform.



Maier-Lavaty serves the uniform requirements of Military, Federal, State and Municipal Fire Departments from coast to coast. Measuring service available throughout the country.

Write for complete information.

Maier Lavaty

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School for Fire Officers

A COMMAND school for senior fire officers will be held in Yakima, Washington, May 26th through 29th. Yakima Fire Chief W. K. Moore announced that the four-day conference will cover administration, training, fire prevention and fire suppression.

The school will be sponsored by the Yakima Fire Department and by the Washington State Board for Vocational Education which has the responsibility for firemen training throughout the state.

Watch that Fire Hose!

BURSTING fire hose caused the death of a man in Pennsylvania recently. After a building fire had been extinguished, the local fire department was taking water out of the basement of the building by pumping through 100 ft. of 2½-in. line (two lengths) into a siphon from which two 2½-in. lines carried water from the building. To accomplish this, a 1,000 gpm pumper supplied by a hydrant was operated initially at 180 pounds pressure. A report from the fire chief states that pressure on the pumper was increased to about 210 pounds. A little while later, the 50-ft. length of hose leading into the siphon burst, striking a local contractor on the chest and knocking him to the pavement. The man's skull was fractured and he died a short time later.

There are several lessons to be learned from this unfortunate incident. First, it should be appreciated that the general public is unaware of the pressure carried in fire hose in normal operation. Many citizens do not realize how violently a hose can move when it bursts or when couplings separate. For this reason, fire fighters have to be watchful and warn people of this danger during any fire department pumping operations whether or not fire lines are established.

It is equally important that pump operators understand the fundamentals of supplying hose lines with the proper pressure. In supplying a siphon, there is always a possibility that the siphon can be blocked by dirt or other obstruction creating a dangerous back pressure particularly if the hose is not in the best condition.

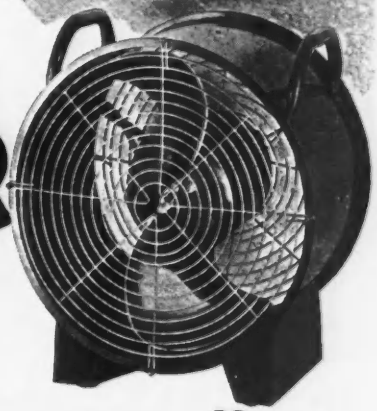
A third item to remember is that fire hose must be examined carefully after every use and tested at least annually. Any sign of weakness or deterioration should be sufficient to warrant taking the hose out of service and replacing it with properly tested hose. A number of good recommendations on this subject are contained in NFPA Standard No. 198 — "Care of Fire Hose," available at 50 cents per copy.

Heard over fire department radio: "Arson Squad called to Gate of Heaven (School)."

Get smoke out, get air in

with Multi-Purpose

SUPER VAC



CONTROLLED VENTILATION UNITS

NOT JUST A FAN... but a powerful vacuum-action air screw... Super Vac is amazingly simple in operation, made possible by the efficient design of the **powerful propeller** that is the heart of the unit. This patented propeller produces 100% pulling or blowing power over its entire surface.

Proved method of saving lives while also reducing smoke damage

Fire departments nation-wide attest to the speed with which Super Vac provides controlled ventilation... so necessary in modern fire fighting. This multi-purpose unit primarily (1) gets rid of smoke and fumes through its powerful vacuum action... or, (2) furnishes a tremendous blast of fresh air into the smoke-congested area, reducing the dangers of combustion and asphyxiation. Although one unit is often sufficient, complete controlled ventilation can be more speedily accomplished by using two or more units... one or more units pulling out the smoke and fumes while the remaining units blow in a steady supply of fresh air.

★ Highly portable... operates in any position
★ Design permits vertical stacking
★ Made in 16" and 24" sizes
★ AC or DC, regular or explosion-proof motors
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For complete details and specifications on
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THE FACE IS FAMILIAR?

Former newspaper reporter Dick Landis, now an inspector of the Bureau of Fire Prevention, Yakima, Washington, has this "pet peeve." He brings out a very important aspect of fire department public relations, that is, the necessity of keeping up-to-date photographs of chief officers and personnel.

IS IT the retention of our *great tradition*, vanity, or just an oversight that we have so few good, recent pictures of our personnel? Look through any fire journal, or even worse, the pictures of the board of directors of our various and sundry fire associations and you will find few recently posed pictures. Most have been taken long ago (I swear that some are Daguerreotypes). The ageless Sphinx has nothing on some of the leaders of our field, men of prominence and experience, who year after year submit the same photograph to publications. How often we note that a picture accompanying the story of a fireman killed or injured has had to be lifted from a group shot or simply is not available.

We talk a good deal about public relations and the fire service is making good strides in this field. I feel it is a disservice, however, to the fire service and to the news media not to have current information and photographs ready for use.

Most newspapers have a form which is given to community leaders asking detailed facts about the individual. Many people think such information will be used only in the obituary column. Their fears are confirmed when they are told that the information is for the newspaper's "morgue." What they may not know is that this morgue is a repository of information past and present from which reporters, researchers and editors can get facts to make a good news story. It is also a photograph file.

Pictures of an entire department need not be costly. I venture to say that every fire department, regardless of size, has a member or a friend available to take photographs. A simple two- or three-light setup for portraiture is easy and inexpensive. Single source flash pictures, while second best, are better than none at all. Stay away from soft focus lenses and gimmicks designed to conceal our natural defects. The photographs should be sharp, have sparkle and good contrast, that is, a full range of tones from white to black. Avoid any but a plain background, preferably a medium light one. Do not use very light or very dark backgrounds since they will detract from picture appeal.

Dress the individual as the public is used to seeing him. If, for instance, the Chief customarily does not wear a uniform don't "suit him up" in brass buttons and black. The matter of the uniform cap is op-

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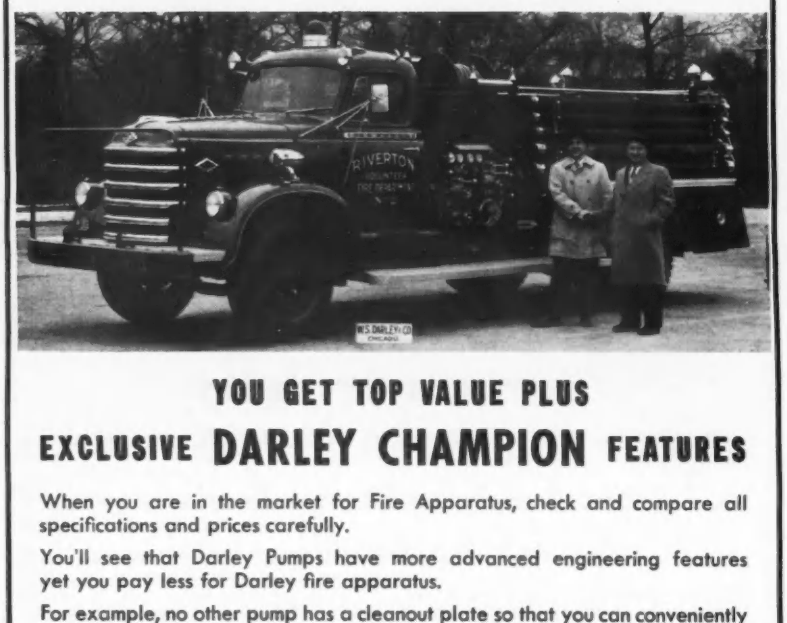
FIRE PUMPS and FIRE APPARATUS!



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EXCLUSIVE DARLEY CHAMPION FEATURES

When you are in the market for Fire Apparatus, check and compare all specifications and prices carefully.

You'll see that Darley Pumps have more advanced engineering features yet you pay less for Darley fire apparatus.

For example, no other pump has a cleanout plate so that you can conveniently remove any obstruction without dismantling the pump. If a stone is lodged in the suction or discharge side of the impeller, it is a simple matter to drop the cleanout plate and reach the cause of the trouble.

An important feature for trouble-free pump performance and low cost maintenance with minimum time out of service.

Darley engineering brings you the best in design, workmanship, materials — that's why CHAMPIONS will outlast and maintain high efficiency longer than other pumps. And only DARLEY gives you a LIFE-TIME pump guarantee.

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50 Years of Friendly Service

tional, but the best picture of a fireman is the one with the cap and uniform. You get good results with a head shot or a head and shoulders photo. Full length pictures are valueless to anyone except the people who sell uniforms.

With the photograph include the information the news media will want, such as the full name, address, date and place of birth, education, date of employment and promotion, fraternal and social affiliations, church preference, organizational memberships, special degrees or honors, the wife's name (no age) and children's names and ages.

Be sure to list any special accomplishments, inventions or improvements which the individual has sponsored or developed. Take the information and the picture to the newspaper, radio or television station. In the case of large fire departments, the paper will have only room enough to file information on chief officers, commissioners and like notables. Make your own file on other grades, because the demand for their pictures will be less.

Guard negatives carefully and be prepared to make an increasing number of prints. One way for this program to pay its own way is for the people to buy prints for their own use. Don't suggest it if you take the pictures, but have a nominal fee schedule ready.

Retake pictures at intervals of three to five years. Why kid ourselves? They are important!

I hope this starts a nation-wide movement in the fire service and that, in all fire stations across the country, lights will go on and shutters will snap. It will help salve my disappointment on meeting the well-known Chief Blank and finding that he has somehow aged thirty years since photographs and advance publicity of his visit arrived last week.

Correspondence Wanted

Des O'Brien, Brigade Instructor, Ohakune Volunteer Fire Brigade, Ayre Street, Ohakune N. I., New Zealand, would like to correspond with readers of FIREMEN magazine and "swap notes" on fires and fire protection. He is particularly interested in hearing from members of the fire service in North America.

Training Dates

ANNOUNCEMENT has been made of the training schedule for fire fighters in Tennessee who want to get instruction at the State Training Center in Murfreesboro. Scheduled for this year are:

Inspection Practices — State Codes . . . April 15–17.

Fire Hazards — Liquid Metals and New Chemicals . . . May 20–22.

16th Annual State Fire School . . . August 17–21.

For more information write to Homer S. Elkins, Instructor-Coordinator, Fire Service Training, 215 Chestnut Street, Chattanooga 5, Tennessee.

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$5.95 add 60c shipping

Quantity prices on request.
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Let Sparky help you sell fire safety to youngsters — and their folks! Rugged 22-inch quality doll with removable white shirt, tie, blue denims, red hat, boots.

Write for illustrated list of other Sparky products

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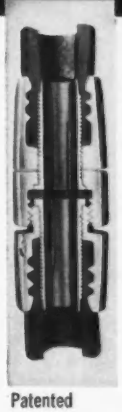
A new high-pressure coupling by BAR-WAY for all types of fabric hose



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1. FULL FLOW—no significant reduction of internal diameter. Pressure is assured.
2. STREAMLINED—round-edged design, no projection.
3. INTERNAL EXPANSION—prevents shrinkage of the hose at the coupling.
4. ACCURATELY MACHINED—always the same . . . interchangeable.
5. REMOUNTABLE—can be removed and re-attached with a key any number of times without cost.
6. WEIGHT—no heavier than comparable expansion type coupling.

Available in polished bronze in both standard rocker and forestry lug. 1½" in production. Larger sizes will be available.

Successfully Tested To Bursting Point Of Double Jacket, Single Jacket And Sweat Hose

Recognizing the trend toward higher and higher pressures in fire fighting, Bar-Way has developed a revolutionary coupling that will withstand the pressure and the pull. This new coupling is designed to fire fighting specifications. It guarantees full flow, full pressure, it is streamlined to slip over obstructions, and it can be interchanged anywhere at any time without damage to either the tube or fabric. Specify Bar-Way! Write Bar-Way Mfg. Co., Stamford, Conn.

BAR-WAY MFG. CO., STAMFORD, CONN.

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Plectron TONE ALERTING RECEIVER

The fire department that is equipped with a PLECTRON Radio Tone Alerting System will gain those precious minutes that are priceless when responding to an alarm.

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Never before has a radio receiver been available for tone alerting that offers so much at a price so low. Available for any radio frequency in the 25-54 and 152-174 megacycle bands. $87.50 Quantity Discounts

Use your present 2-way base transmitter to send emergency voice radio messages direct to your firemen. Up to 12 miles range without outdoor antenna.

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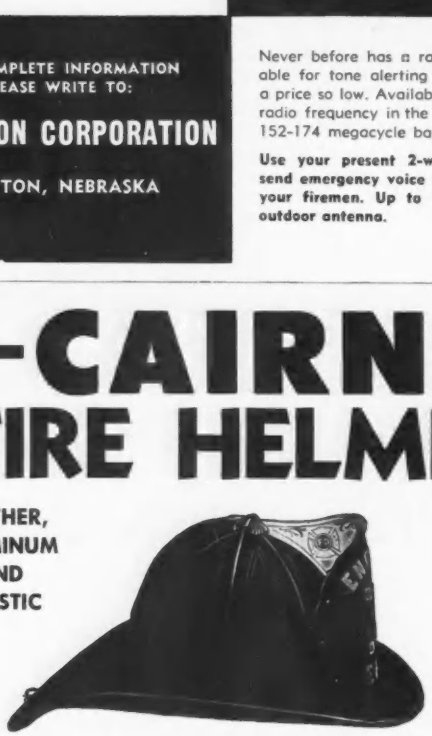

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THE FIREMAN'S STANDARD OF SAFETY

SINCE 1836

"THERE IS NO SUBSTITUTE FOR EXPERIENCE"

Write for Catalog 350

CAIRNS & BRO., INC. — Allwood, Clifton, N. J.

. . . and the Zone Number, Please!

ONCE in a while in this column we have asked fire chiefs who have NFPA membership to get subscriptions to FIREMEN for the officers and men in their departments. Through the years, many chiefs have followed this suggestion, and it is not unusual for some fire departments to order 50, 75 or more than 100 subscriptions to the magazine when starting or renewing the chief's or department's membership in NFPA. This can be done through the fire department or fire company bulletin.

For example, here is how Local 36, IAFF, District of Columbia made announcement in a recent issue of *The Fire Fighter*, which is distributed to all members of the local:

"We have just been advised by the National Fire Protection Association that it is now accepting renewals and new subscriptions to its official magazine, 'Firemen.'

"We are calling upon Association members now subscribing and who would like to continue receiving the magazine to forward to the Secretary, J. E. Zeis, at Engine Co. 6, the subscription price of $2.00 together with their name and proper mailing address. Those members of the Association who would like to enter a new subscription to the 'Firemen' magazine are likewise asked to forward the amount of $2.00 with their name and address to the Secretary at Engine Co. 6."

And by the way, since FIREMEN magazine can be mailed directly to

SPARKY TIE CLIP

A REAL EYE-CATCHER!

1 inch high SPARKY gleams in red, blue and black enamel on bright chromed metal with spring clip.

$2.00 plus 10 cents for shipping

Free list of other SPARKY products

— Write today to —

ROBERTS CO.

Box 86D Wayland, Mass.

the homes of subscribers, we would like to have the postal zone number of each subscriber when the list is submitted.

New Members

NFPA Welcomes the following chiefs and fire departments who recently joined the Association. This month 29,378 subscribers are receiving FIREMEN.

Colorado: Deer Trail Volunteer Fire Department, Deer Trail.

Illinois: North Palos Fire Protection District, Palos Park.

Maryland: Community Fire Company, Rising Sun.

Massachusetts: Millers Falls Fire Department, Millers Falls.

New York: Chief Bowen, Ashville Fire Department, Inc., Ashville; Hagaman Volunteer Fire Company, Hagaman; Water Hose Company No. 5, Inc., Kingston; DeFreestville Fire Department, Inc., Rensselaer; Riverhead Fire Department, Riverhead; Wyandanch Volunteer Fire Company, Wyandanch; Yorktown Heights Engine Company No. 1, Yorktown Heights; Yulan Fire Department, Inc., Yulan.

Ohio: Amanda Volunteer Fire Department, Amanda; Kaiser Aluminum & Chemical Corporation, Belpre; Green Township Fire Department, Greensburg; Port Jefferson Community Fire Company, Port Jefferson; Wyoming Volunteer Fire Department, Wyoming.

Quebec: Gaspe Copper Mines Limited, Murdochville.

Tennessee: Kingsport Fire Department, Kingsport.

Virginia: Tappahannock Volunteer Fire Department, Tappahannock.

West Virginia: Chief D. C. Thumm, Dunbar Fire Department, Dunbar.

ORGANIZATION NEED MONEY?

Sell our delicious Pennsylvania Dutch Butter Mints and Peanut Crunch.

COMBINATION SPECIAL

5 doz. Butter Mints (12 oz. tins) + 5 doz. Peanut Crunch (1 lb. tins) — Total cost $80.00 — Sell for $1.00 each — YOUR PROFIT $40.00

We pay all freight charges. Send NO money with order. Remit in 30 days. Please mention the name of your organization or church.

___ Ship us 10 doz. Special
___ Check here for a free copy of our complete catalog.

PENNSYLVANIA DUTCH CANDIES
Mount Holly Springs, F1 Pennsylvania

Onan NEWS REPORT

Onan Standby Electric Plants guarantee power in emergencies

This Onan 10KW emergency electric plant is installed in the community building of *Indian Hills, Ohio.* It not only provides the police department with all the light and power required, but supplies needs of the fire department, too!

When power interruption occurs, the Onan plant starts automatically and supplies current for all essential purposes . . . lights, radio communication, signals, heating system, and other motor-driven equipment.

Dependable Onan emergency electric plants provide electric power for operation of all vital municipal services. In time of disaster, when power interruptions are most likely to occur, emergency power saves lives, protects property, helps to restore and maintain order. Available in sizes from 500 to 200,000 watts; Diesel or gasoline-powered models.

Teletype machines in the Norwalk, Connecticut police department are supplied with power in emergencies by an automatic Onan Standby Plant. Norwalk's 3,500-watt Onan unit also furnishes power for the oil burner, radio, ventilating fans and 60 fluorescent lights.

See your local distributor or write for folder on standby models

D. W. ONAN & SONS INC.
2793 University Ave. S.E., Minneapolis 14, Minnesota
ELECTRIC PLANTS • AIR-COOLED ENGINES • KAB KOOLER • GENERATORS

Onan ELECTRIC PLANTS

Emergency Reporting

(*Continued from page 15*)

A public emergency reporting circuit can be leased or arranged for from the telephone company. A special listed fire number, such as DR4-1313, is assigned to the circuit and the circuit can generally be answered at one to 13 locations, depending upon distances involved. This circuit is arranged only for incoming messages. Calls on these circuits, where the number is dialed, pass through machine switching devices at the unattended central office and are routed directly to the fire telephones.

There is no need to describe sirens, air horns, whistles and bells used for outside alarm devices. These are good as long as the firemen can hear the alarm. We are, however, interested in alarm devices installed within the volunteer firemen's homes. Radio units are available for receiving an alarm, and now the telephone companies can furnish a group alerting circuit. This circuit uses the facilities of the firemen's private telephones with some restrictions: the phone must be on a single circuit or be the only fireman's phone on a party circuit. A central dispatch point must also be provided; two can be arranged for. Whoever receives the alarm dials a special number. Electrical relays then "seize" all of the telephones on this network and cause a special ring on all telephones not in use at the time of alarm; no alarm could be sounded on a busy party line. The dispatcher can also talk to all firemen. The group alerting circuit would be supervised between the dispatch point and local central office. This system can be installed in an unattended central office. Another alternative is for a separate special circuit to connect the dispatch location with all firemen's homes. This is usually leased on a wire mileage basis. Steady ringing or coded bells can be installed in the dwellings of members. An alarm received over a telegraph circuit can be relayed into this special circuit to sound coded alarms. Technological advances during the past ten years have resulted in the development of several other local fire alarm systems.

City and fire department officials must take all possible steps to assure that fire alarms are received quickly and correctly. Accept the fact that the installation of an unattended central office in your community may present additional problems in connection with the receipt and transmission of alarms and do not expect the telephone company to administer and process these alarms. Develop a closer cooperation between adjoining departments to guarantee that fire calls are routed to the proper department. Advertise your listed fire number. Finally, try to convince city officials and other interested citizens that a properly installed fire alarm system will improve protection in your community.

NFPA Standard No. 73

"Municipal Fire Alarm Systems"

4¾ x 7¼ inches —48 pages

Price: 50 cents

Available from NFPA Publications Department

60 Batterymarch St., Boston 10, Massachusetts

More for your Money...in MORYSVILLE

L-183 EMERGENCY RESCUE UNIT

• Chrome plated hand rail at tapered back • 2 full length seats, one on each side, with back rests • Dome light in body • 7 aluminum sliding windows in the 1-ton unit • 5 aluminum sliding windows in the ¾-ton unit • Insulated top, plyboard lined • Roof ventilator • 19 ga. doors • 18 ga. top • 16 ga. sides • 14 ga. end panels • ⅛" diamond plate floor • 5" structural steel cross members

MORYSVILLE Body Works INC.

813 SOUTH READING AVE., BOYERTOWN, PENNA.

DISTRIBUTORS IN PRINCIPAL CITIES

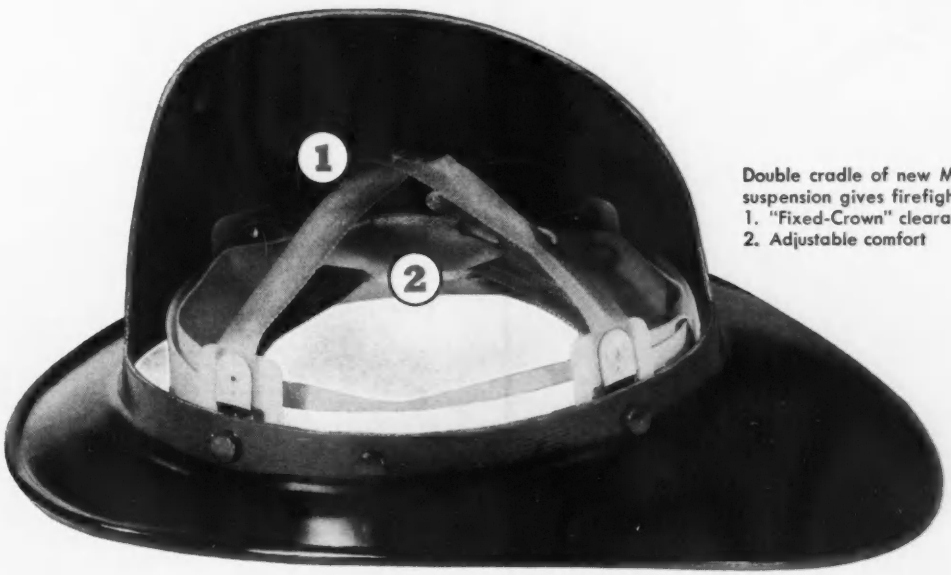
Also a complete line of compact and versatile Fire, Fire-Crash, Rescue and Emergency Units and Special Built Fire Bodies. Finest materials and workmanship, extra-rugged construction and original modern design. Compartments arranged for handy stowage of fire fighting, first aid and life saving equipment, helmets, rain gear, tools, tanks, portable pumps and generators, etc.

Write for FREE Literature

PENETRATION AND IMPACT

demand proper clearance between head and helmet

NOW THIS REVOLUTIONARY NEW MSA ADVANCE GIVES YOU A TAMPER-PROOF MARGIN OF SAFETY



Double cradle of new M-S-A suspension gives firefighters:
1. "Fixed-Crown" clearance
2. Adjustable comfort

Now—from MSA—another safety/comfort first for firefighters. It's the new "Fixed-Crown" suspension for the M-S-A Streamlined Fireman's Helmet.

This revolutionary new advance provides firefighters with a margin of head safety never before known. A double cradle provides a permanent crown clearance of at least 1¼" between the wearer's head and the inside top of the shell. A permanently fixed upper cradle makes this clearance tamper-proof.

The new MSA suspension meets all Federal Government specifications when used in M-S-A Streamlined Fireman's Helmets. These other advanced design features are also important:

EASY TO INSERT, EASY TO REMOVE—Four wide snaps have positive spring steel lock-in catch. It's easy to put in, take out, but prevents accidental detachment in the field.

ELIMINATES PRESSURE POINTS—Metal attaching snaps are recessed into polyethylene sweatband support. This exclusive design feature reduces layer thickness at points of contact.

FAST SIZE ADJUSTMENT—Size adjustments can be made in seconds with a simple collar button device. Head sizes are stamped on the sweatband backing which can be adjusted in one-eighth units.

Write us for descriptive new bulletin. Mine Safety Appliances Company, 201 North Braddock Avenue, Pittsburgh 8, Pennsylvania. Mine Safety Appliances Company of Canada, Limited, 500 MacPherson Avenue, Toronto 4, Ontario.

MSA . . . where safety problems become safety products through research

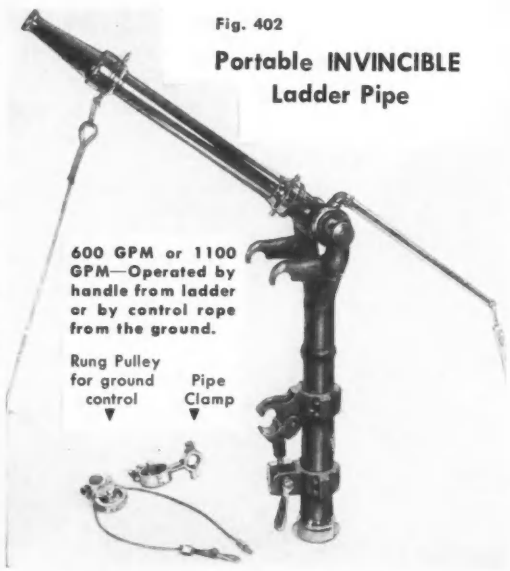
MSA® SAFETY EQUIPMENT HEADQUARTERS

THE INVINCIBLE NOZZLE

Outstanding Performance
Superior Workmanship

Fire Chiefs from Coast to Coast say:
"FOR THE FINEST BRASS GOODS,
Specify **McINTIRE."**

Fig. 402
Portable INVINCIBLE Ladder Pipe


600 GPM or 1100 GPM—Operated by handle from ladder or by control rope from the ground.
Rung Pulley for ground control
Pipe Clamp

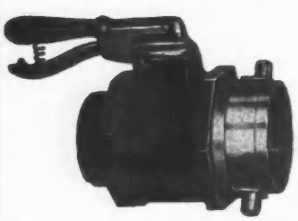


Fig. 163
Double Seat Hydrant Gate, either right hand or left hand. 2½" N.S.T. male x female.

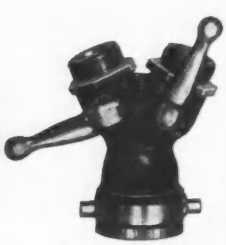
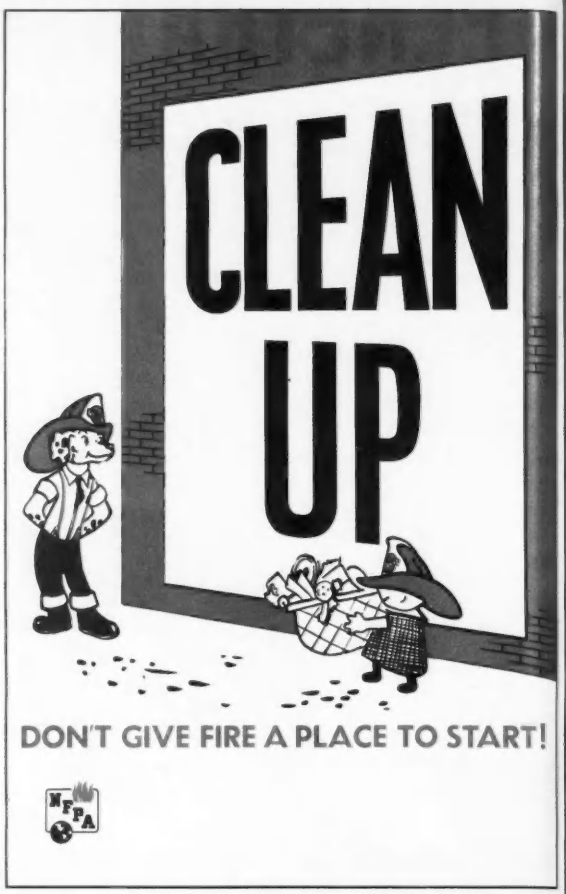


Fig. 1595S
Leader Line Gated Siamese, 2½" x 2-1½" outlets, full water way.

"ORIGINATORS and SOLE MANUFACTURERS" of THE INVINCIBLE NOZZLE

BE SURE YOU SPECIFY "McINTIRE"!

F. N. McINTIRE BRASS WORKS
ESTABLISHED 1837
377 Putnam Ave., Cambridge 39, Mass.



Spring Clean-up Material

A VARIETY of colorful and useful materials for Spring Clean-up Week have been prepared by NFPA. The 11- by 17-in. poster shown above is typical and is available at $3.00 per hundred and $25.00 per 1,000 copies.

This year two special packages have been prepared for fire departments. Listed below they are $9.75 and $8.25 each and, like other Spring clean-up materials, are available from the NFPA, 60 Batterymarch Street, Boston 10, Massachusetts.

Special Clean-up Package

A special easy-to-order, economical package of selected materials for those who can use only limited quantities.

Package includes: 25 clean-up posters; 25 clean-up stickers; 50 clean-up folders; 50 coloring sheets; 50 Sparky inspection blanks; 50 home fire safety check lists; 25 each of the three Sparky comic books, (total 75); 12 school inspection check lists; 12 industrial self-inspection forms; 12 merchants' self-inspection forms; 25 "Buying, Building, Owning the Fire Safe Home" folders; 25 "Fire — What Would You Do?" booklets; and 25 Sparky lapel tabs.

A $12.00 value for only $9.75.

No changes or substitutions allowed.

Special TV Package

The Sparky 60-second clean-up film, the 20-second Sparky animated film spot, and the Sparky clean-up slide.

The three items ordered as a unit (value $10.50)..... $8.25

All prices F.O.B. Boston. Orders shipped express, collect.

For your fire station library!

Get $60.50 worth of books for only $42.50!

(Or pick any of these books you want.)

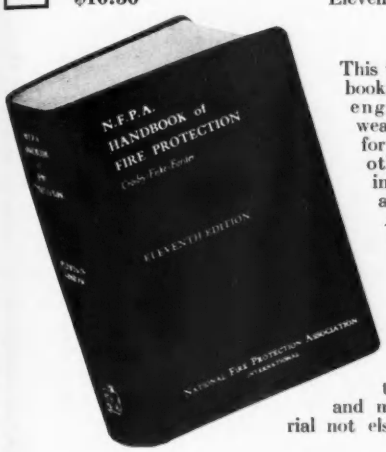
1958 National Fire Codes

☐ **Complete 6-volume set — $35.00**

- ☐ **Vol. I — Flammable Liquids and Gases, $7.00.** 35 standards, 896 pages.
- ☐ **Vol. II — Combustible Solids, Dusts, Chemicals and Explosives, $7.00.** 35 standards, 656 pages.
- ☐ **Vol. III — Building Construction and Equipment, $7.00.** 31 standards, plus discussion of building codes and references to model codes, 744 pages.
- ☐ **Vol. IV — Extinguishing Equipment, $7.00.** 33 standards, 1136 pages.
- ☐ **Vol. V — Electrical, $7.00.** The National Electrical Code, 1956 edition, plus six other electrical standards and digest of electrical provisions of 69 others, 720 pages.
- ☐ **Vol. VI — Transportation and Misc., $7.00.** 28 standards on air, marine, bus and truck transportation and salvage, plus a comprehensive review of applicable government regulations, 672 pages.

☐ **NFPA Handbook of Fire Protection**

$10.50 Eleventh Edition (1954) 1656 pages



This valuable reference book of fire protection engineering has a wealth of vital data for fire fighters and others specializing in fire prevention and fire protection. Also used as a text for beginners. Includes hydraulic data, charts, tables, illustrations of automatic sprinklers, and other fire protection devices, and much other material not elsewhere available.

☐ **Research on Fire**

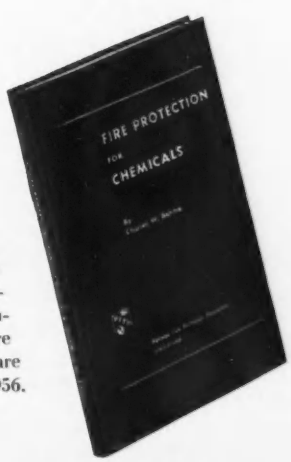
$5.00

1957 edition, 184 pages

A survey that tells about the facilities, personnel and management of thirty-nine agencies in the USA and sixteen in other countries engaged in fire research. An adequate picture of the kinds of work going on is presented. Cloth bound, 100 illustrations, 1957.

☐ **Fire Protection for Chemicals**

$3.00 1956 edition, 152 pages



Here's something for every fire station library! Deputy Chief Charles W. Bahme of Los Angeles wrote this book with an appreciation of fire fighters' problems. Outlines methods for the prevention, detection, control and extinguishment of fires likely to arise where ever chemicals and explosives are used, stored or transported. 1956. Cloth bound, 152 pages.

NFPA, 60 Batterymarch Street, Boston 10, Mass.

☐ **Send me all the books shown here — a $60.50 buy for only $42.50.**

☐ **Just send me the books checked.**

Name .....

Street .....

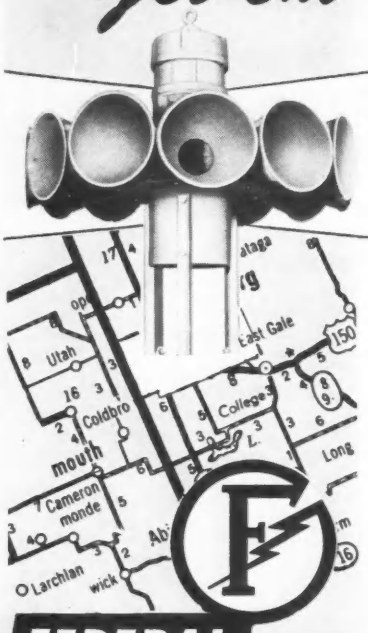
City ..... **Zone** .....

County ..... **State** .....

☐ **Check enclosed** ☐ **Please send bill**

CHECK THE BOOKS YOU WANT—THEN SEND THIS PAGE TO NFPA

Get 'em OUT...



Your community has grown.

Once adequate, for the small town you used to be, the old alarm siren is only doing a fraction of the necessary job. Not only must the siren sound cover a greater area but it must get around more and larger buildings which are obstacles to sound travel.

Replace your *smaller* siren with the famous FEDERAL STH-10 Vertical Siren or supplement your existing *larger* siren with another to extend coverage and eliminate dead spots.

The one siren town of a decade ago has grown to a multi-siren town today! Don't wait for disaster to bring this to public attention, prepare now. Write for catalog #200.

FEDERAL SIGN and SIGNAL Corporation

8717 S. State St., Chicago 19, Ill.

NO CHIEF SHOULD BE WITHOUT ONE!

GLOBE'S colorful, new firemen's clothing catalog — fully indexed and illustrated — gives you complete data, description and prices on the finest firefighting clothing of its kind in the world today

IDEAL FOR SPOT COMPARISONS AND INFORMATION AT YOUR FINGERTIPS!

FREE **Mail this coupon now**

GLOBE MFG. CO., PITTSFIELD, N.H.

Gentlemen:

Please rush me your latest catalog showing the complete GLOBE line of firefighters' clothing.

NAME _____

ADDRESS _____

CITY _____ STATE _____

GLOBE DURABLE FIREMEN'S **SUITS**

GLOBE MANUFACTURING COMPANY PITTSFIELD, NEW HAMPSHIRE

Arson Investigator's Seminar

THE 15th International Arson Investigator's Seminar will be held at Purdue University, from April 27 to May 1, 1959. This intensive training program will be conducted in cooperation with the International Association of Arson Investigators and other state agencies interested in the recognition, investigation, prosecution and prevention of the crime of arson.

The seminar will present the nation's outstanding arson authorities, lecturers and moderators. The program will include essential basic information for the arson investigator which will be expanded into advanced techniques of investigation.

For additional information concerning the seminar write to: Professor Shelby Gallien, Seminar Director, Public Safety Institute, Purdue University, West Lafayette, Indiana.

Volunteers' Convention

MAYWOOD, New Jersey, will be the host community for the 46th Annual Convention and parade sponsored by the New Jersey and New York Firemen's Association. Fire Chief Henry Koster, Convention Chairman, anticipates 6,800 marchers, 60 bands, 160 pieces of fire apparatus and some 75,000 visitors. Aerial ladder trucks, fire department pumpers and other apparatus will be demonstrated in a special exhibit area. Exhibit space will also be provided in two large halls. Another feature of the Convention will be a display of old-time fire apparatus and museum pieces from the collection of the New York City Fire Department.

FIREMEN!

INCREASE YOUR INCOME!

Convert your spare time into steady income selling most popular line of Belts and Buckles with Fireman's personal initials, first name or nickname with miniature replicas of actual fire equipment beautifully enameled, also lapels, tie clasps, key chains, money clips, and cuff links. Excellent repeat business. We furnish you with FREE complete sales kit. Really nice part-time money producing items.

NO INVESTMENT NECESSARY!

For full particulars, write to

HOOK-FAST SPECIALTIES, INC.

Factory — 16 Eudora St.

P.O. Box 1425F Providence, R.I.

Horace B. Clark

NFPA member Horace B. Clark passed away at the age of 83 at his home in North Granby, Connecticut. He had been an NFPA member since 1912 and for 30 years was a member of the Board of Fire Commissioners of the City of Hartford where he was affiliated with the Hartford *Courant*. Upon retirement he moved to North Granby and was instrumental in organizing the Lost Acres Fire Department to provide public fire protection service for the community. He appropriated funds for building several of the fire stations and also provided a number of pieces of fire apparatus for the department. In addition, he maintained a fire station and apparatus on his own estate. He was an expert in motor pump operation and conducted numerous schools for pump operators at his own expense. He also was an avid photographer and had a carefully indexed pictorial record of fires and fire department activities in the Hartford area covering a 50-year period. He was in attendance when the first 12-hour acceptance test was run on pumpers by the National Board of Fire Underwriters. He was a close personal friend of NFPA president, Chief Henry G. Thomas of Hartford from the time of the latter's first appointment to the Hartford Fire Department.

IRFAA Officers

R. HERMAN WEAVER of Roanoke, Virginia, was elected president of the International Rescue and First Aid Association at the 11th Annual Convention held in Jacksonville, Florida, last November. He assumed office January 1, succeeding Don Dunnington of Bethesda, Maryland, now serving his second term.

Conrad H. Kreyling of River Edge, New Jersey, was elected first vice-president; Joseph J. Banach of Marinette, Wisconsin was re-elected second vice-president; William J. Amberman of Elkridge, Maryland was re-elected recording secretary; and Theodore Hart of Plainfield, New Jersey, was elected treasurer to succeed Mr. Kreyling.

Junior Sparkys

YOUNGSTERS who belong to Sparky's Fire Department in Middletown, Pa. (more than 75 boys between the ages of 7 and 14), were the subject of a two-page photo story in a recent issue of *Parade*, a major Sunday magazine.

Groups of the boys were pictured going through various drills and receiving instruction in first aid, sending alarms and using smoke masks and extinguishers. Everyone was uniformed in Sparky T-shirts, smart white helmets with Sparky shields, and denim trousers.

There are two units in Middletown. Both were organized in 1956 when fire fighters and other men in the community enrolled the boys in Sparky's Fire Department, Boston 1, Massachusetts. Sponsors and instructors are the officers and men of Middletown's Union Hose Company and Liberty Hose Company — all volunteers.

Parade magazine is distributed with the Sunday editions of newspapers in more than 50 large cities. Total weekly circulation of the magazine is 7,000,000 readers.

Fire School Dates

Montana: The Third Annual Conference of the Montana State Fire Chiefs' Association will be held at Miles City, June 11–13. For details write to Secretary-Treasurer William S. Hayes, Montana State Fire Chiefs' Association, 208 Eklund Building, Great Falls, Montana.

Nebraska: The 22nd Annual Nebraska State Fire School will be held at the State Volunteer Firemen's Association and Civil Defense Training Center, Municipal Airport Grounds, Grand Island, Nebraska, May 3–5. For detailed information write to Secretary Russell D. Salak, Fire School Committee, P. O. Box 312, Schuyler, Nebraska.

FOR SALE

1 — Mack City Service Hook & Ladder Truck

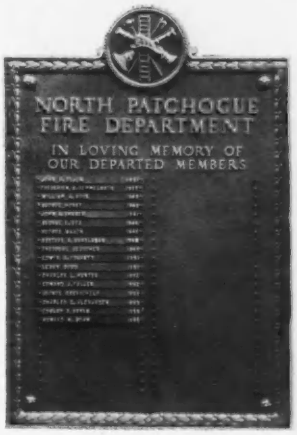
1 — Seagrave 600 gpm Pumper

1 — Ford 500 gpm Pumper

Each in excellent condition. Inspection invited. Photographs sent on request. Bids will be called for approximately April 1, 1959.

Contact: **Robert Weiss, Sec.**

SMITHTOWN FIRE DISTRICT
100 Elm Avenue
Smithtown, L.I., N. Y.



A permanent record of honor and service in enduring bronze

There is no finer way . . . to pay permanent honor . . . than an everlasting record in a dignified International Bronze plaque.

Write today for our beautifully illustrated Brochure A . . . showing hundreds of original ideas for reasonably priced solid bronze plaques, honor rolls, memorials, awards, testimonials, commemorative tablets. For trophy, medal, cup ideas, write for Brochure B. Dept. 67.

INTERNATIONAL BRONZE TABLET CO., INC.
150 West 22nd St., New York 11, N. Y.

The Original
MIDWESTERN
STRIPED SAFETY COAT

- Brilliant Yellow Rubber Stripes!
- Maximum Visibility!
- Maximum Durability!
- Exclusive Safety Features!

See your Midwestern dealer or WRITE for Free Catalog and fabric samples.

MIDWESTERN SAFETY MFG. CO.
Mackinaw Illinois

this month's EQUIPMENT NEWS

Warren, Michigan, Adds New Ambulances

Commissioner William B. Burr of Warren, Michigan, Fire Department, accepts delivery of two new M-M ambulances from Robert Rossiter, Assistant Sales Manager of *Miller-Meteor Motor Car Division, Divco-Wayne Corporation*, Bellefontaine, Ohio. All members of the Warren Fire Department have advanced first-aid cards and four hold first-aid instructor cards.

●

Want an inexpensive alarm that sounds off when someone tampers with your car? Check into Police Auto Alarm, sold through *Gregory Sales Company*, 316 Marion Building, Cleveland 13, Ohio. . . . Two new streamlined dry chemical extinguishers in 2½- and 5-pound capacities are announced by *Walter Kidde & Company, Inc.*, 675 Main Street, Belleville 9, New Jersey.

●

Gene Wheeler now directs the sales program in the industrial, sports and fire department fields for *Cornelius* high pressure air compressors providing clean air for breathing equipment. . . . For badges and insignia, be sure to write for new catalog from *C. G. Braxmar Company, Inc.*, Dept. P, 216 East 45th Street, New York 17, New York. . . . Thomas J. Ocasek succeeds the late Richard E. Vernor as Manager of Fire Prevention Department, Western Actuarial Bureau, Chicago, Illinois, and will be assisted by Emmett T. Cox, senior field officer, Harry H. Wolff, field officer, and Mary E. Tridle, secretary.

●

"Manpower" Fire Engine Body

This new type of "manpower" fire engine body, designed to transport extra men as well as vital tools and equipment, is being manufactured by *Reading Body Works, Inc.*, 420 Gregg Avenue, Reading, Pennsylvania. The Narberth, Pennsylvania, Volunteer Fire Company is using the first of these models, donated by the Barnes Foundation of Merion, Pennsylvania, in memory of the late Narberth chief, Al Nulty. Manufacturer states that this support unit body can be adapted to use as a first-line fire fighter.

New Bulletin

"Schools Are Still Burning," a four-page brochure issued by American District Telegraph Company, spells out the facts of fire safety to educators, school board officials and others interested in safeguarding our children's lives and protecting facilities for their education.

The illustrated brochure points up the need for better fire protection for the nation's schools. It describes, briefly, measures that can be taken to prevent belated discovery and delayed alarms, factors which account for most school-fire tragedies. For free copies, write to ADT Company, 155 Sixth Avenue, New York 13, N. Y.

●

Akron's new Gizmo, a compact shut-off that works easily under highest pressure, is gaining fire service popularity. Get the facts today from *Akron Brass Manufacturing Company, Inc.*, Wooster, Ohio. . . . The hazardous antics of lightning and means of protecting life and property against this destructive force are contained in a new booklet, "Lightning Facts and Figures," available free from *Lightning Protection Institute*, 53 West Jackson Boulevard, Chicago 4, Illinois.

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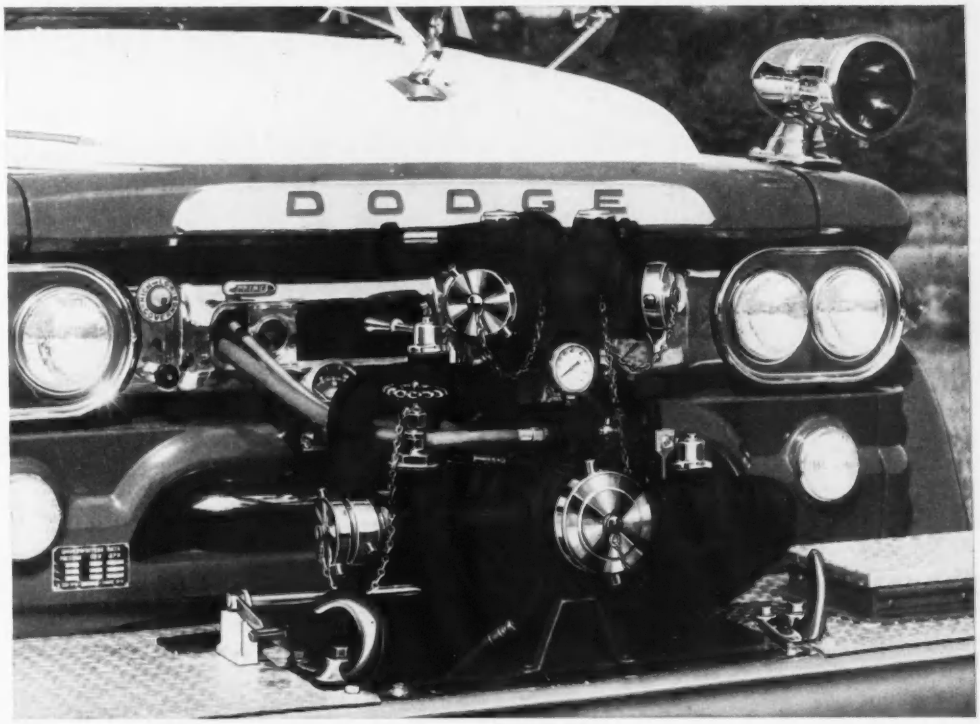

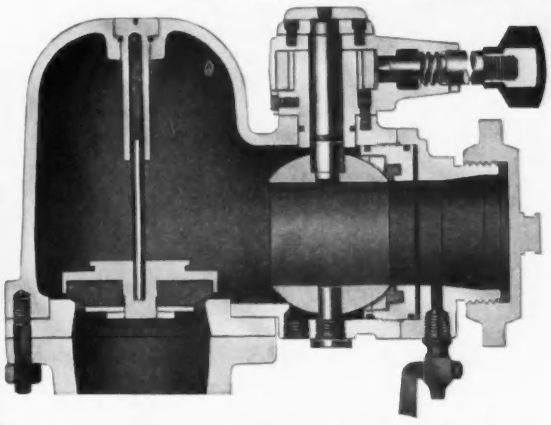

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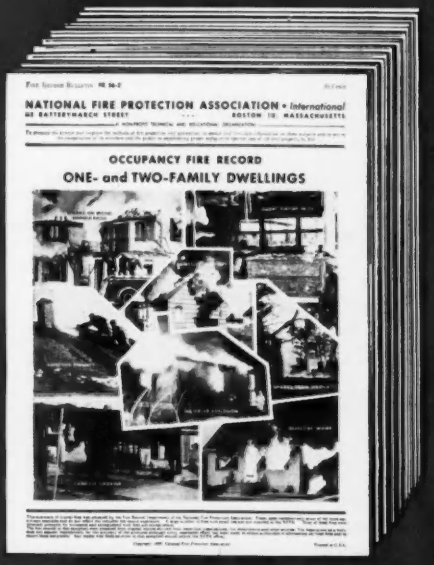

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